FACTORS INFLUENCING CUSTOMER SATISFACTION AND LOYALTY IN THE NIGERIAN TELECOMMUNICATIONS INDUSTRY

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DECLARATION

I certify that the *dissertation* submitted by me for the degree *Master of Commerce (Marketing Management)* at the University of Johannesburg is my independent work and has not been submitted by me for a degree at another university.

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ABSTRACT

The Nigerian telecommunications industry is a competitive market in which major industry players (MTN, GLO, AIRTEL and 9MOBILE) are struggling to retain their current marketshare, keep customers satisfied, and establish long-term relationships with customers. This can be attributed to the fact that every mobile service provider is offering almost the same services. Their poor marketing strategies and philosophies have led customers to possess multiple SIM cards, a low incidence of customer loyalty, and a high switching rate in the sector. Inadequate customer service, irregular prices, poor network quality, limited product packages, and poor overall service quality have also resulted in a lack of trust, and commitment and high switching behaviour among subscribers, mainly owing to dissatisfaction. Therefore, to remain competitive in this market, Nigerian mobile operators have to anticipate and deliver on the factors that influence customer satisfaction and loyalty. For this reason, the primary objective of this study was to examine the factors that influence customer satisfaction (customer service, price fairness, network quality, diversity of products, and overall service quality), mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria.

The study adopted a descriptive research design, and made use of quantitative research method in the form of an online survey questionnaire for data collection through the non-probability snowball sampling method. The target population of this study was mobile phone users in Nigeria, who patronised the top four network providers; the sampling units were male and female respondents aged from 18 to 65 who had a mobile network line from one or more of the top four network providers and who had subscribed or recharged in the previous six months. For the statistical analysis, 390 questionnaires were useable. Descriptive statistics, factor analysis (exploratory and confirmatory), structural equation modelling, and mediation were the statistical procedures used.

The results of the study revealed that customer service be considered and measured from the perspectives of customer service access and customer care. This study also established that customer service access, customer care, price fairness, network quality, and overall service quality influence customer satisfaction, while trust and commitment mediate the relationship between customer satisfaction and customer loyalty. Based on the findings of this study, mobile network providers are recommended to invest in sending customer care operatives for regular compulsory training, ensure that operatives have extensive knowledge of all products or offerings and can speak empathetically. Second, they must redesign their websites to become more customer-friendly, mobile-friendly, and easy to navigate. To reduce unsatisfactory network quality, mobile network providers should deploy adequate network infrastructure in both urban and rural areas, such as new global undersea fibres and 5G services.

To earn the trust of subscribers, complaints relating to unwarranted charges or wrong billings should be handled speedily and automatic refunds be activated. Customer centric strategies such as customisable and personalised services that allow subscribers create their own portfolio and pick services they need should also be adopted.

LIST OF KEY WORDS AND DEFINITIONS

The following key words will be used throughout the study:

Customer Relationship Management: Ramani and Kumar (2008:27) define customer relationship management as "all the processes needed to achieve, build and maintain an ongoing relationship with customers through differential and tailored treatment of individual customers based on their likely responses to alternative marketing programs, so the contribution of each customer to the overall profitability of the firm is maximized".

Nigerian Telecommunications industry: The term telecommunications for this study refers to the science and technology of transmitting information through mobile telephone (wireless telephones that are fully portable and not attached to a base unit) services in the Nigerian industry market (Nekmahmud & Rahman, 2018:340). The telecommunications industry in Nigeria is one that can currently be described as self-aware and steadily adapting to the stark realities of business – changing trends, intense rivalry, regulatory uncertainties etc (Deloitte, 2021). It is noteworthy that the Nigerian telecommunications industry is a predominantly prepaid market.

Customer satisfaction: Oliver (2014:8) refer to customer satisfaction as a person's judgement of pleasure or disappointment resulting from comparing a service outcome with the expectations of consumption-related fulfillment, including levels of under-or over-fulfillment. If the performance falls below expectations, the customer is dissatisfied; whereas, if the performance matches the expectations, the customer is satisfied**.**

Customer loyalty: Oliver (1999:34) describe customer loyalty as a deeply held commitment to repurchase or patronise a preferred product or service consistently in the future, despite situational influences and marketing efforts that have the potential to cause switching behaviour.

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

There is an increasing need for telecommunications firms to differentiate themselves from competitors at the augumented service level, as every service provider offers almost the same services, leaving competition among mobile telecommunications service providers in Nigeria more prevalent (Hajar, Ibrahim, Darun & Al-Sharafi, 2020:69). Studies have shown that customers are now harder to please, smarter, and more price-conscious, demanding, and sensitive, as there are other service providers with equal or better offers. This has led to the majority of mobile firms losing customers at an alarming rate in the Nigerian telecommunications sector, as customers switch to other service providers and own multiple SIM cards (Adebisi, Adejuyigbe & Amos, 2020:36). Therefore, to understand consumer behaviour, remain competitive, and retain customers in this market, Nigerian mobile operators have to anticipate and deliver on the factors related to customer satisfaction and loyalty.

One way to achieve this satisfaction and loyalty is to develop long-term relationships with their key customers (Ismană-Ilisan, 2018:81). Customer relationship management (CRM) has been proposed as an enterprise-wide commitment and innovative management philosophy that provides the transition from a transaction-based to a relationship-based model. CRM concentrates on the acquisition, development, and retention of profitable customer relationships (Baran, Galka & Strunk 2008:26; Bashir, 2017:293; Hlefana, Roberts-Lombard & Stiehler-Mulder, 2020:1-2), and establishes unique long-term relationships with customers through the management of detailed individual customer information and the careful maximisation of customer touchpoints, which can lead to increased profits for a business and greater customer loyalty (Roberts-Lombard, 2012:3804; Lee, 2018:1).

Factors such as customer service, price fairness, network quality, diversity of products, and overall service quality have been found by various previous studies (as listed in Chapter 4, section 4.2) to be determinants of customer satisfaction and loyalty in the telecommunications sector. This study therefore adopts and integrates these factors from previous studies, and examines their influence on customer satisfaction and loyalty in the telecommunications sector in Nigeria through the concept of CRM. The premise is that a relationship-based approach is

required for customer satisfaction in a service industry such as the mobile telecommunications sector in Nigeria. This study was underpinned by various theories, such as: social exchange theory (Homans, 1958:598; Kimuli, Kasimu & Sabi, 2018:569), relationship marketing theory (Berry, 1983:61; Grönroos, 2017:218), and CRM theory (Payne & Frow, 2006:137; Ismană-Ilisan, 2018:81). It was grounded in a positivistic, deductive theory-based research approach, and quantitative research methods were used.

In this section, an introduction presented the perspective on which this study would focus. The sections that follow present insights into the Nigerian telecommunications sector, a statement of the problem, the objectives of the research, and the significance of the research (academic and practical contributions to the sector). A literature review highlighting the theoretical paradigm and the factors influencing satisfaction is presented. Thereafter, the research methodology, research design and plan, population and sample, data collection instruments, sources and procedures, and data analysis are discussed.

To provide more insight into the study, the next section presents the background to the study.

1.2 BACKGROUND TO THE STUDY

The global telecommunications industry, which includes fixed and mobile telephones, has witnessed rapid growth and innovation over the past three decades, becoming one of the most important industries around the world (Ogungbade, 2015:270, Yaqub, Halim & Shehzad, 2019:62). Nigerian Telecommunications Limited (NITEL) was established in 1985 to help the nation develop its telecommunications sector (Adi, 2015:17). However, the sector remained underdeveloped until its deregulation in 1992 and the formulation of a new regulatory body known as the Nigerian Communications Commission (NCC) (Nkordeh, Bob-Manuel & Olowononi, 2017:1; Eke, 2020:1). The objectives of the deregulation were to create an environment that would facilitate the supply of telecommunications services, allow private entrepreneurs to enter the market while promoting fair competition, and enhance service levels for consumers (Oladimeji & Akinwole, 2018:4). The evolution of the Nigerian telecommunications industry, which highlights the deregulation of the sector and the emergence of the NCC is discussed further in Chapter 2, section 2.4.

The telecommunications industry in Nigeria is competitive, comprising four companies with a combined market share of more than 90% (MTN - 37.38%, Glo - 26.80%, Airtel - 26.32%, 9mobile - 9.44%), with the rest of the competitors (M-Tel, Visafone, Starcomms and Multi-links) sharing the remaining 10% (Ogungbade, 2015:270; NCC, 2019:1). The Nigerian

telecommunications industry has grown as it has generated employment opportunities in the country (Oghojafor, Ladipo, Ighomereho & Odunewu, 2014:16), creating an estimated 2.5 million jobs in the last decade (Nkordeh et al., 2017:3). The period from 2000 has been described as Nigeria's telecommunications revolution because of the enormous growth and innovation registered in the industry (Adi, 2015:18; Eke, 2020:1). The aggregate number of subscribers has risen exponentially: a subscriber rate of 139,143,610 in December 2014 increased to 173,670,035 in 2018, an increase of 25.05% in that period (NCC, 2019:1). This has made the Nigerian telecommunications industry the largest and fastest growing in Africa (Izogo, 2016:746), and the tenth-fastest growing telecommunications market in the world (Omenugha, 2015:553). According to reports by the NCC, telecommunications contributed 10.43% to Nigeria's gross domestic product (GDP) in the second quarter of 2018 estimated at Nigerian Naira 1.6 trillion ($4.4 billion) compared with 7.41% in the third quarter of 2017 (NCC, 2019:1). The Nigerian telecommunications industry is discussed in broader details in Chapter 2.

Oghojafor et al. (2014:68) and Yusuf (2017:3) noted that telecommunication mobile service operators have faced a number of problems that have lead to inefficient services. Issues such as the poor state of service provider connectivity infrastructure and outdated communication technology add layers of operational costs and service tariffs that are passed on to the consumer (Mawoli, 2009:114; Izogo, 2016:749). These endogenous variables could be fully controlled by the firms, and could be used effectively to ensure customer satisfaction (Oghojafor et al., 2014:70). The problems referred to have led to controversy and criticism over time for unfair and unjustifiable billings or tariffs, acute network congestion, poor signals, deceptive promotions, inadequate customer service, and generally poor service (Omenugha, 2015:553; Munyanti & Masrom, 2018:10). These inefficiencies and controversies in turn have led to telecommunications providers in Nigeria facing the challenges of demonstrating customer-centric and continuous service improvement. Ramadania, Melyanti and Isfenty (2018:1919) observed that the rapid diffusion of mobile services in Nigeria has been accompanied by low satisfaction and high switching behaviour (Oghojafor et al., 2014:68). High switching behaviour is attributed to the lack of trust and commitment among customers. Before any relationship can exist, both parties must perceive the existence of mutual trust (Roberts-Lombard & Du Plessis, 2012:62; Mahmoud, Hinson & Adika, 2018:260). It is thus also important for marketers to view their organisation from a relationship perspective in an effort to improve customer satisfaction, trust, and commitment, encourage low switching behaviour, and ultimately achieve customer loyalty (Berndt & Tait, 2014:1).

Customer relationship management plays an important role in the telecommunications industry, as it uses a customer-focused relationship-oriented strategy in marketing (Ogungbade, 2015:270; Grönroos, 2017:221). Customer relationship management can be understood as a business philosophy that allows organisations to comprehend customers' needs and requirements clearly through their histories and preferences, and that can be used as the key in helping organisations to plan for the future (Rafiki, Hidayat & Razzaq, 2019:187). Telecommunication operators need to focus on factors such as personal treatment, personalisation, and one-to-one marketing to attract and retain customers' attention (Rafiki et al., 2019:187). Keeping customers is thus an issue that needs continuous monitoring and improvement by mobile operators, because keeping customers means more cash flow and fewer operational and marketing costs (Alshurideh, 2016:65). In addition, customers have acquired relatively good knowledge of the characteristics of each telecommunications service supplier and the offers that affect their decision-making; making a suitable choice will thus encourage them to become involved in a long-term relationship (Alshurideh, 2016:65).

A review of the current literature (refer to Chapter 4, section 4.2) shows limited context-specific research material on the telecommunications industry in Nigeria. Available studies on CRM in relation to customer satisfaction and loyalty appear to focus on the insurance, banking, and hospitality sectors, and not so much on telecommunications (Babatunde & Ajayi, 2010:98; Ogbadu & Usman 2012:61; Melodi, Olufayo & Gbadamasi, 2012:228; Toyese, 2014:44; Akintunde & Akaighe, 2016:81). Recent studies (Morgan & Govender, 2017a; Bakare & Fetuga, 2017; Ofori, Boakye & Narteh, 2018) of the factors that influence customer satisfaction have only focused on a few variables, and have discussed the topic from only one point of view (refer to Chapter 4, section 4.2). In considering all previous research studies in the telecommunications industry, this study contributes to the holistic exploration of the main factors (customer service, price fairness, network quality, diversity of products, and overall service quality) that constitute customer satisfaction, and how these variables lead to trust, commitment, and low switching, and ultimately build loyalty in the Nigerian telecommunications industry. This study is therefore distinguished from previous studies in that it addresses the topic while using more comprehensive variables whether independent or dependent that can be controlled by telecommunications firms to meet the needs of customers and other dynamics of the marketing environment. The study also aims to examine the relationship management aspect. Thus the objective of this study is to examine the factors that lead to satisfaction and consumer loyalty and that will enable relationships to be built with customers in the Nigerian mobile telecommunications sector.

Taking the background of the study presented above into consideration, the problem statement is discussed in the next section.

1.3 PROBLEM STATEMENT

Consumers are in search of a telecommunications provider that can offer good network quality, a variety of products, fair pricing, and access to satisfactory customer service without sacrificing overall service quality (Izogo, 2016:761; Deloitte, 2021), all of which creates the opportunity to develop long-term relationships with them. Owing to the fierce competition in the Nigerian telecommunications market (Ogungbade, 2015:270), many firms are struggling to retain their market share and to keep customers satisfied and loyal. Their poor marketing strategies and philosophies have led to a low incidence of customer loyalty and a high churn rate in the sector (Oyatoye, Adebiyi & Amole, 2015b:10; Oluwafemi & Adebiyi, 2018:102). Inadequate customer service, irregular prices, poor network quality, limited product packages and poor overall service quality have resulted in a lack of trust and commitment, and high switching behaviour among the subscribers of the diverse networks, mainly owing to dissatisfaction (Bakare & Fetuga, 2017:85; Nwakanma, Udunwa, Anyiam, Ukwunna & Obasi, 2018:4; Mahmoud et al., 2018:262). These service conditions have become a major concern to the telecommunications service providers, as it has become difficult to keep customers satisfied and to build loyalty and long-term relationships with them.

A review of the available literature showed that not much empirical research to date has focused on the factors that influence customer satisfaction and loyalty while the mobile telecommunications sector in Nigeria aims to develop relationships with its customers. The few studies carried out in Nigeria have largely excluded the telecommunications sector, with only Toyese (2014) undertaking a condensed study that evaluated CRM in the sector and its consequential effect on customer loyalty from an employee perspective. In Toyese's (2014) study, the primary data was collected using a structured questionnaire, with a sample size of 140 respondents from MTN, Glo, Airtel and Etisalat (now called 9mobile). The findings revealed that customer retention and competitive advantages were major benefits that were accruable to the industry. Among the strategies employed by the players in this industry to facilitate these findings were promotional activities and quick service delivery. The field evidently lacks empirical research on the main factors influencing customer satisfaction i.e., through relationship building factors mediated by trust, commitment, and low switching costs, all of which lead to customer loyalty. This may be because CRM and its overarching emphasis on building relationships with customers is a business strategy that telecommunications firms in Nigeria are

still trying to grasp (Tauni, Kahn, Durrani & Aslam, 2014:55). This leaves room for more empirical studies on relationship-building factors and their influence on satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the Nigerian telecommunications sector. This study sought to fill this gap.

The objectives formulated to assist in resolving the research problem discussed above are described in the next section.

1.4 STUDY OBJECTIVES

1.4.1 Primary objective

- The primary objective of the study was to examine the factors that influence customer satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria.

1.4.2 Secondary objectives

The following were the specific objectives of the study:

- To determine whether customer service, price fairness, network quality, diversity of products, and overall service quality lead to customer satisfaction.
- To determine whether customer satisfaction leads to trust, commitment, low switching, and customer loyalty.
- To examine the relationship link between trust, commitment, and low switching costs as mediators between customer satisfaction and customer loyalty.

The next section discusses the significance of the study.

1.5 SIGNIFICANCE OF THE STUDY

The mobile telecommunications sector in Nigeria is receiving attention owing to the high rate of switching, the possession of multiple SIM cards (Oluwafemi & Adebiyi, 2018:103), and continual complaints from dissatisfied customers, especially as the market is reaching saturation point (African Business Magazine, 2013; Izogo, 2016:748). Patronage from existing customers is therefore crucial for mobile telecommunications services providers (Izogo, 2016:748). This has made service providers eager to reconfigure their marketing strategies and to find strategies that will assist in developing long-term relationships with customers who are loyal (Tauni et al., 2014:55; Akpoviroro, Amos, Oladipo & Adewale, 2020:94). The results from this study will help the industry players to understand the factors that influence customer satisfaction and loyalty,

which should help operators in the retention and sustainability of their market share, thus building long-term relationships with customers and finding more innovative more ways to serve customers better. Telecommunication firms will also be able to comprehend strategies that will enable them to win the trust and commitment of customers.

Academically, this research will contribute to theoretical relevance in the contemporary consumer market and to its practical implementation in relationship management, as it is grounded in various theories (social exchange theory, relationship marketing theory, and CRM theory). This study focused on a combination of factors (customer service, price fairness, network quality, diversity of products, and overall service quality) from different researchers. Until now, these factors have not been reviewed holistically. It will also expand the knowledge of studies relating to customer relationship management, customer satisfaction, trust, commitment, switching costs and customer loyalty. Future studies of CRM and telecommunications will also receive empirical literary guidance from this research study, as it was coducted in an emerging; market while most studies to date have been conducted in developed economies.

The next section presents a literature review of the theoretical grounding and the main constructs being studied, which are broadly discussed in Chapters 3 and 4 respectively.

1.6. LITERATURE REVIEW

1.6.1 Theoretical grounding and underpinning

This study was grounded mainly in social exchange theory while also taking into account relationship marketing theory, customer relationship management theory, service quality, expectation disconfirmation theory, and trust-commitment theory. This section explains the theoretical relationship of all the factors.

1.6.1.1 Social exchange theory

The social exchange theory developed by Homans (1958:602) considers individuals' social behaviour relating to economic activities, and has a grasp on consumer and organisational behaviour (Emerson 1962:32; Chinomona & Mofokeng, 2016:858). It explains the exchange of goods and services that takes place between two independent parties (organisation and individual) that are seeking benefits and acting with self-interest and reciprocity (Lee, Capella, Taylor, Luo, & Gabler, 2014:2141; Cropanzano, Anthony, Daniels & Hall, 2017:2). Social exchange theory postulates that the two parties in an exchange - in this case, the

telecommunications provider and the subscriber - can also exchange resources through a social relationship, suggesting that the exchange of goods and services takes place not only for monetary purposes but also for non-monetary benefits, such as building relationships, satisfaction, trust, commitment, and loyalty (Yoganathan, Jebarajakirthy & Thaichon, 2015:16).

When adopted in the telecommunications industry, the theory encompasses encounters between telecommunications providers and customers, highlighting that a succesful (or unsuccessful) encounter with a service provider or its employees (customer care) will impact positively (or negatively) on the customers' views and relationships with the firm (Lawler, Thye & Yoon, 2014:190; Landor & Barr, 2018:332). This makes a difference in the way that customers view service quality directly related to service employees (De Bruin-Reynolds, Roberts-Lombard & De Meyer, 2015:28). For this reason, the social exchange theory is important in the relationship between telecommunications firms and their subscribers, as organisations that fail to meet their customers' standards of price, proactive customer service, network quality, diversified products, and service quality will end up losing them to competitors (Singh & Sirdeshmukh, 2000:159; Yoganathan et al., 2015:16; Clark, Fine & Scheuer, 2017:45). Rather than prioritising monetary gains, firms must develop strategies that will satisfy both the customer and the organisation in the long run (Bojei & Abu, 2014:170).

Social exchange theory predicts that, over time, relationships are strengthened by establishing trust through satisfaction, which ultimately builds commitment through the exchange of resources (Cropanzano & Mitchell, 2005:884; Abubakar & Mokhtar, 2015:466). When the proper balance is struck, there is the potential for long-term relationships (Berry & Parasuraman, 1991:12), and the emergence of customer relationships as a basis for firm competition (Lee et al., 2014:2142). To this end, the social exchange theory was adopted for this study, as it is embedded in the development of long-term relationships with customers and covers service quality, customer satisfaction, trust, commitment, switching intention, and customer loyalty (discussed further in Chapter 3, section 3.3.1).

1.6.1.2 Relationship marketing (RM) theory

The relationship marketing theory concept was first introduced in the fields of service marketing and industrial marketing by Berry (1983:26), who defined RM as a strategy for attracting, maintaining and, in multiservice organisations, enhancing customer relationships. However, according to Grönroos (1997:407), relationship marketing is the process of identifying and

establishing, maintaining, enhancing and, when necessary, terminating relationships with customers and other stakeholders at a profit, so that the objectives of all parties are met, by the mutual giving and fulfilling of promises. Makhitha (2017:649) and Grönroos (2017:218) explain that, compared with traditional marketing, relationship marketing is not short-term or restricted only to customers; it is a paradigm shift that focuses on relationships with various stakeholders. Knox and Gruar (2007:115) and Roberts-Lombard and Petzer (2018:430) postulate that relationship marketing provides a progressive scheme for the management of stakeholders, as it underlines customer co-operation in the formation and development of a beneficial long-term relationship-building process, which goes beyond the instantaneousness of market transactions. Previous research (Gupta & Sahu, 2015:377; Ogungbade, 2015:272; Rizomyliotis, Konstantoulaki, Kaminakis, Giovanis & Papastathopoulos, 2018:3) on the telecommunications sector, which adopted this theory - encompassing customer service, service quality, price fairness, network quality, trust, commitment, customer satisfaction and customer loyalty - predicted that, when customers are fully involved in product or value creation, firms will have access to invaluable marketing intelligence information on how best to meet their expectations by understanding their needs and behaviour, and keep them from switching to competitors. Customers are likely to remain loyal to an organisation that manages relationships proficiently (Melewar, Foroudi, Gupta, Kitchen & Foroudi, 2017:580). The relationship marketing theory was therefore be adopted for this study, as it offers firms the opportunity to increase market share, gain competitive edge, retain customers, create customer value, and maintain continuous customer contact (Toyese, 2014:46; Al-Dmour & Sweidan, 2016:515; Opara & Opara, 2016:14) (discussed further in Chapter 3, section 3.3.2.1).

1.6.1.3 Customer relationship management theory

The “customer relationship management” ideology came to light in the marketing sector, in information technology (IT), and in the vendor and practitioner communities in the mid-1980s to 1990s (Payne & Frow, 2005:167; Bashir, 2017:293). While relationship marketing focus on building relationships with all stakeholders, including customers, CRM focuses on only one of these stakeholders – the customer. Customer relationship management theory is thus grounded in the relationship marketing (RM) theory (Rahimi & Kozak, 2017:40), based on the premise that CRM is a customer-centric managerial strategy that aspires to establish long-term relationships with profitable customers by employing all-inclusive customer knowledge (Grönroos, 2007:275; Khedkar, 2015:3; Ascarza, Ebbes, Netzer & Danielson, 2017:347). CRM

theory postulates that every customer is different, and should be treated as such, by customising and tailoring products that meet their individual needs (Ismană-Ilisan, 2018:81). This can only be achieved when the firm is in constant touch with the customer.

Research suggests that a high service quality evaluation is not sufficient to drive customer loyalty, making CRM fundamental (Chen & Hu, 2013:1085; Nyadzayo & Khajehzadeh, 2016:263) and crucial in driving customers' commitment and retention. CRM in the contemporary marketing environment is therefore highly relevant (Gummerus, Von Koskull & Kowalkowski, 2017:3; Van Tonder & Petzer, 2018:951), as it increases customer value and service quality through understanding and satisfying specific customers' needs innovatively (Navimipour & Soltani, 2016:1053; Karimi-Ghartemani, Shekarchizadeh & Khani, 2018:742). Customer relationship management is thus considered a viable tool for attracting, developing, and maintaining successful customer relationships over time, by targeting the right customer with the necessary product or service through the right channel at the required time, and building customer profitability and loyalty (Berry, 1995:237; Grönroos, 2007:275; Nyadzayo & Khajehzadeh, 2016:263). Previous related studies (Abani Mohanty & Das, 2017:433; Raina, 2017:117; Tahir, 2018:92; Sekhar & Malyadri, 2019:16) in the telecommunications sector (in which this theory encompasses price fairness, customer service, service quality, trust, commitment, customer satisfactions and customer loyalty) predict that, when organisations adopt CRM, they will be able to access innovative customer-oriented strategies that will satisfy the needs of their customers through customisation.

To this end, the customer relationship management theory was adopted for this study, as it offers many tangible and intangible benefits to businesses, such as: improving customer satisfaction, retaining existing customers, providing strategic information, and improving customer lifetime value (Santouridis & Veraki, 2017:1124; Rahimi & Kozak, 2017:42; Hlefana et al., 2020:2). Rafiki et al. (2019:189) found that CRM applications could reduce operational costs, improve profitability and service delivery, and enhance customer loyalty. They also noted that CRM projects help enterprises gain a competitive advantage in the market by enabling the provision of differentiated products and unparalleled services. Toyese (2014:44) and Nyadzayo and Khajehzadeh (2016:263) stated that, with the ever-increasing competition for market dominance, many firms have used CRM to improve business intelligence and decision-making, which has earned them customer trust and commitment (see the further discussion in Chapter 3, section 3.3.3).

1.6.1.4 Commitment and trust theory

The commitment and trust theory was developed by Morgan and Hunt (1994:23), and is considered one of the most influential relationship marketing theories to date (Abdullah, Putit, & Teo, 2014:373). The theory postulates that trust leads to commitment, because relationships characterised by a high level of trust are greatly valued by exchange partners, who will have a stronger desire to commit themselves to such a relationship (Goodman & Togna, 2014:38; Balaji, 2015:21; Brown, Crosno & Tong, 2019:155), which will lead to customer loyalty (Rather, Shehnaz, Murtaza & Shakir, 2019:211). The theory also describes the presence of commitment and trust as the building blocks of strong mutually beneficial relationships because they lead directly to cooperative behaviours that are conducive to relationship marketing success (Morgan & Hunt, 1994:22; Nyadzayo & Khajehzadeh, 2016:263). One way in which customers develop a commitment to and trust in a business organisation over time is when it consistently provides quality service (Haghkhah, Rasoolimanesh & Asgari, 2020:32). The commitment and trust theory was be adopted for this study, as it illustrates and predicts customer behaviour by determining the factors influencing customer satisfaction and loyalty (discussed further in Chapter 3, section 3.3.4).

1.6.1.5 Service quality theory

Service quality, according to Zeithaml (1988:3) and Hussain, Al Nasser and Hussain (2015:168), can be conceptualised as the consumers' judgement of the overall excellence or superiority of a service. Parasuraman, Zeithaml and Berry (1985:42) and Hussain et al. (2015:168) postulate that service quality is influenced by expected service and perceived service. If services are received as expected, the service quality is satisfactory; but if the services received exceed their expectations, customers will be delighted, and will perceive service quality as excellent. Service quality is therefore a main factor in a company's success because it is key to customer satisfaction. A service provider who consistently meets customer expectation by delivering excellent service quality will, in no time, build a long-term beneficial relationship with the customer and earn their trust, commitment, and loyalty (Balaji, 2015:21; Nyadzayo & Khajehzadeh, 2016:263; Munyanti & Masrom, 2018:11).

High service quality will help to retain existing customers, and also to attract customers from other service competitors whose service quality is perceived as poorer (Rahimi & Kozak, 2017:42; Kungumapriya & Malarmathi, 2018:288). Previous studies (Kushwah & Bhargav, 2014; Alabar, Egena & Gbande, 2014; Ingy & Hazem, 2016; Ramadania et al., 2018) on the

telecommunications sector that adopted this theory identified the current elements for overall service quality as network coverage area, call quality, customer support and representative attitude, customer complaints resolving, a good billing system, a variety of pricing schemes, and a variety of value-added services. The service quality theory was thus adopted for this study as being applicable to it and was used to determine customer perceptions on the factors influencing satisfaction (explained further in Chapter 3, section 3.3.5).

1.6.1.6 Expectation disconfirmation theory

The expectation disconfirmation theory by Oliver (1977:481) stresses the definition of customer satisfaction, which is a customer's post-purchase evaluation and affective response to the overall product or service experience (Bakare & Fetuga, 2017:86; Munyanti & Masrom, 2018:10). The theory postulates that, when a customer receives service that meets expectations or is better than anticipated, then a positive disconfirmation ensues, leading to satisfaction; whereas, if the service does not match expectations, a negative disconfirmation ensues, leading to dissatisfaction (Saleem & Raja, 2014:706). Consequently, when customers consistently receive proactive customer service, good network quality, fair pricing, and high service quality they will perceive the service offering as high value, leading to a long-term relationship (Calvo-Porral, Faíña-Medín & Nieto-Mengotti, 2017:720; Munyanti & Masrom, 2018:11), thus, making relationship satisfaction greater in the presence of trust (Balaji, 2015:21). The expectation disconfirmation theory predicts that, as satisfaction is related to meeting customer needs, repeated realisation of these needs leads to commitment (Balaji, 2015:21; Dasanayaka, Al Serhan, Glambosky, & Gleason, 2020:4), which leads to customer loyalty (Yusuf, 2017:8; Ramadania et al., 2018:1920). Previous related studies that also used this theory include those by Alabar et al. (2014) and Saha, Islam and Hoque, (2016). The expectation disconfirmation theory was thus adopted for this study, as it predicts consumer behaviour in an exchange process (explained in more detail in Chapter 3, section 3.3.6).

Based on the above theories and literature, the next section focuses on the specific factors explored in this study.

1.6.2 Factors influencing customer satisfaction and loyalty in the telecommunications sector

Various researchers have highlighed the different factors responsible for influencing or determining customer satisfaction in the telecommunications sector (as shown in Chapter 4, section 4.2). This study focused on a combination of these factors (from different researchers),

which until now have not been reviewed holistically. The study specifically considered customer service, price fairness or billing, network quality, diversity of products, and overall service quality, as they are the factors that have been most often examined in the literature as influencing customer satisfaction and loyalty in the mobile telecommunications sector. These factors have a great impact on customer satisfaction, and play an important role in maintaining and developing customer relationships, as discussed in Chapter 4, section 4.2.

1.6.2.1 Customer service

According to Oghojafor et al. (2014:73), customer service or care is defined as customer support systems, complaint processing, speed of complaint processing, ease of reporting complaints and friendliness when reporting complaints (Kim, Park & Jeong, 2004:151; Nwakanma et al., 2018:4). Customer service thus includes all assistance that the network providers render or offer to subscribers directly or indirectly before, during, and after purchase in order to satisfy the customer experience with their services (Nwakanma et al., 2018:4). Oghojafor et al. (2014:73) also highlighted that excellent customer service entails more than what is said to or done for the customers; it also means giving customers a chance to make their feelings known. Siong, Wendy and Ye (2015:1085) and Nwakanma et al. (2018:4) support the opinion that providing excellent customer service, dealing with dissatisfaction, and working to resolve each complaint and inquiry that is received individually and promptly (Oghojafor et al., 2014:73) could help companies to ensure that customers remain satisfied and loyal and keep switching back (Nwakanma et al., 2018:4). This is because, when complaints are not handled properly, customers will begin to seek out other service providers (Siong et al., 2015:1085). Adebiyi, Oyatoye and Amole (2016b:56) and Adebiyi, Shitta and Olonade (2016a:4) emphasised that quality customer service is essential in building customer relationships, which in turn lead to customer satisfaction and loyalty. Previous research (Adebiyi et al., 2016a:8; Kasbekar, 2017:33; Bakare & Fetuga, 2017:85; Munyanti & Masrom, 2018:17) found a positive and significant relationship between customer service and satisfaction (discussed in detail in Chapter 4, section 4.2.1). Based on these results, the researcher proposes the following hypothesis:

H1: There is a direct and positive relationship between customer service and satisfaction in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.2 Price fairness

Price is an amount of money charged for a product or service, or a sum of the value that customers exchange for the benefit of having or using the product or services (Kotler & Armstrong 2012:290; Munyanti & Masrom, 2018:11). Price fairness is therefore defined as consumers' overall assessment of whether the offered price of a product or service of a service provider is really reasonable and so can be accepted or justified (Xia, Monroe & Cox, 2004:2; Hanaysha, 2016:33). In the telecommunications industry, especially with mobile service operators and consumers, price is not limited only to the call rate, but also covers the price of recharge vouchers, SMS charges, the Internet charge (data), and other factors (Nwakanma et al., 2018:4). Price fairness plays an important role in customer satisfaction and loyalty, as it is an extrinsic product-quality cue for customers (Yusuf, 2017:7; Siong et al., 2015:1086). Nwakanma et al. (2018:4) noted that having extensive network coverage is not sufficient to attract and retain customers in the telecommunications market, and that offering the services at an attractive and affordable rate is equally necessary to achieve satisfaction in the market. Customers only feel satisfied when the price they pay for the product or service is equal to or more than they actually get (Yaqub et al., 2019:66; Manzoor, Baig, Usman & Shahid, 2020:67). Telecommunication service providers in Nigeria should therefore charge tariffs that are fair and acceptable to subscribers, taking cognisance of customers' price sensitivity and its effects (Nwakanma et al., 2018:4; Yaqub et al., 2019:66). Previous research (Chakraborty & Sengupta, 2014:243; Siong et al., 2015:1089; Munyanti & Masrom, 2018:17; Setiawan, Wati, Wardana & Ikhsan, 2020:1100; Putu, & Ekawati, 2020:497) has found a positive and significant relationship between price fairness and satisfaction (discussed further in Chapter 4, section 4.2.2). Based on these findings, the researcher proposes the following hypothesis:

H2: There is a direct and positive relationship between price fairness and satisfaction in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.3 Network quality

Network quality refers to the vastness, speed and strength of the network signal (Munyanti & Masrom, 2018:11; Manzoor et al., 2020:67). A study carried out by Bakare and Fetuga (2017:85) found that the network quality of mobile services is the most significant of all the mobile service attributes in Nigeria, meaning that customers' perception of network quality strongly influences their perception of mobile operators and their satisfaction level. When network quality, such as coverage or call quality, does not meet expectations, it results in

customer complaints (Siong et al., 2015:1086; Manzoor et al., 2020:67), which implies that frequent low network coverage and capacity leaves customers dissatisfied and encourages switching behaviour to competitors who have a greater network coverage (Nwakanma et al., 2018:4). Providing a strong, consistent, non-dropping, and non-fluctuating signal in all major areas of the country will result in customer satisfaction, which leads to customer loyalty, which can be achieved through the deployment of adequate network infrastructure with high network capacity in both urban and rural areas, and thus the provision of extensive network coverage (Nwakanma et al., 2018:4). Previous research (Kasbekar, 2017:33; Bakare & Fetuga, 2017:85; Nwakanma et al., 2018:9; Mpwanya & Letsoalo, 2019:81; Ting, Tan, Lim, Cheah, Ting & Ting, 2020:248) has found a positive and significant relationship between network quality and customer satisfaction (discussed in detail in Chapter 4, section 4.2.3). Based on these results, the researcher proposes the following hypothesis:

H3: There is a direct and positive relationship between network quality and customer satisfaction in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.4 Diversity of products

Du (2018:30) defines product diversity as the extent to which a firm delivers products and services in a broad spectrum of categories. Saha et al. (2016:254), in their study, defined the diversity of products in the telecommunications industry a wide array of products or services and facilities offered by the mobile network providers, such as mobile banking, business SIM cards, and data only or data and other service bundles. Oluwafemi and Adebiyi (2018:103) explained that the deregulation and liberalisation of the Nigerian telecommunications sector has made it highly competitive, and therefore, in order to keep the firm uppermost in the minds of its subscribers, they should be provided with more sophisticated and diversified products and services. A product diversification strategy can thus act as a tool of competitive advantage that is adopted by organisations to offer products that satisfy individual customers' needs (Siong et al., 2015:1086). Siong et al. (2015:1086) also found that product diversification and variety have a significant positive effect on telecommunications service choice, as consumers tend to be more satisfied with a greater range of services that are offered when other conditions remain constant. Oluwafemi and Adebiyi (2018:103) suggested that not only these products and services should be provided to consumers; the information that describes these products and services should also be effectively communicated to them. It is stated that "the degree of product varieties and customisation, influences customer satisfaction level and subsequently service choice" (Siong et al., 2015:1086). Previous research (Siong et al., 2015:1089; Pojoh, Kindangen

& Arie, 2019:4550; Tjahjaningsih, Ningsih & Utomo, 2020:485) has found a positive and significant relationship between the diversity of products and customer satisfaction (discussed in more detail in Chapter 4, section 4.2.4). Based on these results, the researcher proposes the following hypothesis:

H4: There is a direct and positive relationship between diversity of products and customer satisfaction in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.5 Overall service quality

Service quality refers to the measurement of how well the service that is delivered consistently matches customer expectations (Parasuraman, Zeithaml & Berry, 1988:15; Ramadania et al., 2018:1920). Service quality is conceptualised as a factor consisting of five determinants: tangibility, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988:15; Chakraborty & Sengupta, 2014:237). This study focused on the overall service quality that telecommunications provides. From the literature review, researchers have identified various factors as items for conceptualising overall service quality, including the ability to connect smoothly to other networks, good quality of voice, proactive service calls, good quality of customer services, accurate billing details, and timely bills for post-paid connections (Chakraborty & Sengupta, 2014:238; Ogungbade, 2015:272; Adebiyi et al., 2016a:6). Consequently, when customers perceive high service quality, they will have increased satisfaction and trust, which will result in repeat purchases and an increase in the market share of the service provider as long as a premium price is charged (Calvo-Porral et al., 2017:720; Ogungbade, 2015:272; Munyanti & Masrom, 2018:11). Previous research has found a positive relationship between overall service quality and customer satisfaction (Ogungbade, 2015:277; Adebiyi et al., 2016a:8; Opele, Afolabi & Onifade, 2018:1107; Munyanti & Masrom, 2018:17; Ofori et al., 2018:590) (explained broadly in Chapter 4, section 4.2.5). Based on these results, the researcher proposes the following hypothesis:

H5: There is a direct and positive relationship between overall service quality and customer satisfaction in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.6 Customer satisfaction

Oliver (1997:13) defined customer satisfaction as a person's expression of either pleasure or disappointment when comparing a service outcome with their expectations. If the performance falls below expectations, the customer is dissatisfied; whereas, if performance matches

expectations, the customer is satisfied (Shah, Husnain & Zubairshah, 2018:363). Customer satisfaction is not only a key factor required in building relationships with customers, but also a crucial driver of customer loyalty and superior performance (Soh, Chin & Wong, 2015:215). Customer satisfaction also serves as an indicator of customers' positive or negative feelings about the service provider, which in this case is the telecommunications sector (Moreira, Silva, & Moutinho, 2016:846) (discussed in more detail in Chapter 4, section 4.3).

1.6.2.7 Trust

Morgan and Hunt (1994:22) defined trust as the willingness to rely on a partner to whom confidence is entrusted in order to establish and continue a successful relationship. In the service context, trust is the belief held by a customer that service providers will render the service that meets the customer's needs (Ogungbade, 2015:274). Trust eliminates the barriers that hinder long-term relationships, knowledge-sharing, and continuous feedback, thus enabling creativity, innovation, and competitiveness (Swanson & Thorsson, 2015:18; Sharafizad & Standing, 2017:272). Du Plessis and Roberts-Lombard (2012:62) and Mahmoud et al. (2018:262) stated that, before a relationship can exist, both parties must perceive that trust exists. And trust is truly important, especially in the service industry, owing to the concept of intangibility that portrays the service itself (Bojei, Radam & Abu, 2012:975). Therefore, the more the customer trusts a company, the higher the value of and the tendency to use their services, and of talking positively about the company's services (Parsa & Sadeghi, 2015:1246) (explained further in Chapter 4, section 4.4).

1.6.2.8 Commitment

Commitment is defined as an enduring desire to maintain a valued relationship (Morgan & Hunt, 1994:22). Commitment is a central construct for understanding the strength of customer relationship management theory (Adika, 2015:25). It is also regarded as one of the most important variables in CRM, in which exchange partners believe that an ongoing and sustainable relationship with one another is critical, has significant mutual benefits, and requires maximum effort to maintain (O'Donnell, Brown & Marsh, 2014:89; Ng, Fang & Lien, 2016:37). Generally, customer commitment is regarded as a complex construct that developed from the literature on organisational behaviour (Kiesler, 1971:30; Bojei et al., 2012:976) and industrial organisation psychology (Fullerton, 2014:659). Izogo (2017:22) defined it simply as the desire to maintain a relationship with a particular telecommunications service provider. Roberts-Lombard and Du Plessis (2012:156) argued that commitment originates from trust. Customers

will thus make commitments only to trustworthy telecommunications providers (Chacha, 2015:5; Adika, 2015:25) (discussed in depth in Chapter 4, section 4.5).

1.6.2.9 Low switching costs

Switching costs refers to all the factors that make it more difficult and costly for customers to move to alternative service providers (Willys, 2018:1025). Ramadania et al. (2018:1921) explained that there are three types of switching costs: procedural switching costs, which primarily involve the loss of time and effort; financial switching costs, involving the loss of financially quantifiable resources; and relational switching costs, involving psychological or emotional discomfort owing to the loss of identity and the breaking of bonds (Willys, 2018:1025). In their research, Ramadania et al. (2018:1921) proved that all three types of switching costs influence consumers' intentions to stay with their current service provider. Switching costs in the Nigerian telecommunications sector are very low (Izogo, 2017:20), and so customers can move from one service provider to another if they are not satisfied with the service they receive. Telecommunication firms therefore have to keep their subscribers satisfied at all times by keeping up with customer needs and improving on factors that influence customer satisfaction, such as fair price, good network coverage, diversified products, and overall service quality. Customers who are satisfied will not think of switching, and they will remain loyal will remain to their service provider (Ramadania et al., 2018:1919). These customers will also serve as promotional outlets for service providers by spreading electronic word of mouth (eWOM), and will repurchase from the service provider (discussed in detail in Chapter 4, section 4.6).

1.6.2.10 The relationships between satisfaction, trust, commitment, and low switching costs

Mahmoud et al. (2018:262) explained that satisfied customers will trust their service provider because they can count on them and be committed to the relationship, which will reduce switching and lead to customer loyalty. Without trust, a relationship cannot exist, and none of the parties will be committed. This will lead to switching to other service providers (since switching costs is low) who offer better services. Thus, for loyalty to exist in the telecommunications sector, customers must be satisfied before trust and commitment can be exhibited (Mahmoud et al., 2018:262) (broadly explained in Chapter 4, section 4.7).

Previous studies found a postive and significant relationship between customer satisfaction and trust (Madjid, Hadiwidjojo & Djumahir, 2013:59; Youcef, Cherifi & Benhabib, 2015:5; Van Tonder & Petzer, 2018:965; Minta, 2018:29; Setiawan et al., 2020:1100). Some studies have also found

a positive and significant relationship between customer satisfaction and commitment (Youcef et al., 2015:5; Van Tonder & Petzer, 2018:965; Rather et al., 2019:209; Jamshidi & Rousta, 2021:167), and a positive and significant relationship between customer satisfaction and low switching costs (Edward & Sahadev, 2011:339; Willys, 2018:1035; Garga, Maiyaki & Sagagi, 2019:8; Wong, Wong & Leung, 2019:8). Based on the results of these studies, the researcher proposes the following three hypotheses:

H6: There is a direct and positive relationship between customer satisfaction and trust in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

H7: There is a direct and positive relationship between customer satisfaction and commitment in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

H8: There is a direct and positive relationship between customer satisfaction and low switching costs in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

1.6.2.11 Customer loyalty

Customer loyalty is described as a deeply held commitment to repurchase or patronise a preferred product or service consistently in the future, despite situational influences and marketing efforts that have the potential to cause switching behaviour (Oliver, 1999:34; Afridi, Gul, Haider & Batool, 2018:217). Customer loyalty is usually measured by a customer's repeat purchase behaviour (Chen & Wang, 2016:348; Yilmaz & Ari, 2017:72; Inegbedion & Obadiaru, 2019:583-584). Several researchers have argued that, in addition to this behavioural perspective, customer loyalty should be measured from an attitudinal perspective (Chou, Lu, & Chang, 2014; Chang & Thai, 2016:684, Yang & Chao, 2017:685), and they have defined it as a customer's attitude to a continuing relationship with their service provider (Chang & Thai, 2016:684). In telecommunications services, loyalty is the most crucial performance benchmark (Aslam et al., 2018:179). It has long been realised that customer loyalty is crucial in enhancing consumers' intentions to repurchase, which in turn allows businesses to gain competitive advantage and build long-term relationships (Jiang & Zhang, 2016:87; Russo, Confente, Gligor & Autry, 2016:894). Loyalty plays a central role in creating a firm's profitability because it reduces the likelihood of a customer switching to a competitor (Revilla-Camacho, Vega-Vázquez & Cossío-Silva, 2017:1040). Given the fact that research into loyalty to a service describes a multifaceted construct, this study will follow prior studies (Chou, Lu, & Chang, 2014; Chang & Thai, 2016, Yang & Chao, 2017:685) that adopted both behavioural and attitudinal elements to remedy the shortcomings of both approaches, because the behavioural perception

of loyalty is too narrow and could be influenced by some situational factors, that have an impact on a customer's decision to use the same mobile telecommunication service provider (Dikcius, Kirse, Casas & Koncanina, 2019:95) (discussed in Chapter 4, section 4.8).

1.6.2.12 The relationships of satisfaction, trust, commitment, and low switching costs with customer loyalty

Customer satisfaction not only encourages relationship building, it also breeds loyalty (Soh et al., 2015:215). However, customer satisfaction alone is not enough to explain customer loyalty (Gerpott, Rams & Schindler, 2001:257; Oghojafor et al., 2014:74, Ogungbade, 2015:275), as other factors such as trust, commitment, and switching costs have also been postulated to have a significant influence on customer loyalty (explained further in Chapter 4, section 4.9).

Although empirical results indicate a direct and significant relationship between customer satisfaction and customer loyalty (Mahmoud et al., 2018:269; Aslam, Arif, Farhat & Khursheed, 2018:179; Ting et al., 2020:248; Jamshidi & Rousta, 2021:167), previous research has also found a positive and significant relationship between trust and customer loyalty (Madjid et al., 2013:59; Youcef et al., 2015:5; Ofori et al., 2018:590; Ting et al., 2020:248). Previous research has also found a positive and significant relationship between commitment and customer loyalty (Rizwan, Javed, Aslam, Khan & Bibi, 2014:383; Chakiso, 2015:59; Mahmoud et al., 2018:269; Youcef et al., 2015:5; Rather et al., 2019:209), and a positive and significant relationship between low switching costs and customer loyalty (Picón, Castro & Roldán, 2014:747; Makwana, Sharman & Arora, 2014:91-92; Shafei & Tabaa, 2016:350; Ramadania et al., 2018:1923). Based on these results, the researcher proposes the following hypotheses:

H9: There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

H10: There is a direct and positive relationship between trust and customer loyalty in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

H11: There is a direct and positive relationship between commitment and customer loyalty in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

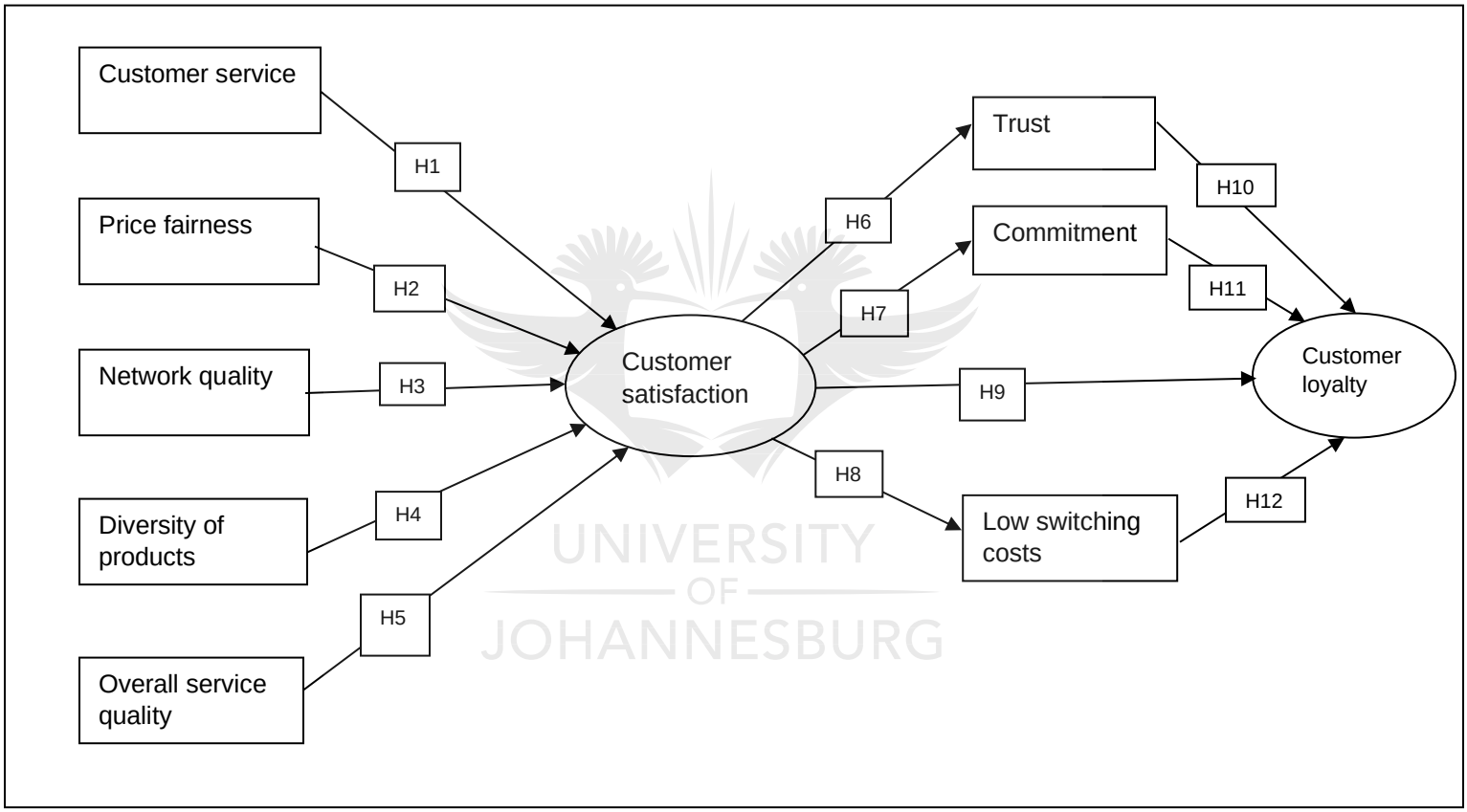
H12: There is a direct and positive relationship between low switching costs and customer loyalty in the Nigerian mobile telecommunications industry (see Figure 1.1, Chapter 1)

The next section presents the conceptual framework and hypotheses of the study.

1.7 CONCEPTUAL FRAMEWORK AND HYPOTHESES

After conducting the literature review, the researcher created a conceptual framework that is empirically supported by studies carried out by other researchers. This conceptual framework, illustrated in Figure 1.1 below, measures the impact of the factors that influence customer satisfaction and loyalty in the mobile telecommunications industry of Nigeria.

Figure 1. 1: A conceptual framework of factors that influence customer satisfaction and loyalty in the mobile telecommunications industry in Nigeria



Source: Researcher's own construct

An outline of the adopted research methodology and design of this study, which throws light on how data was obtained and analysed, is given in the next section.

1.8 RESEARCH METHODOLOGY AND DESIGN

The researcher employed various approaches and techniques to ensure the collection of the most appropriate and relevant information, in support of this research. The 'research onion' of Saunders, Lewis and Thornhill (2016) was used as a guideline to illustrate the key stages in developing the research methodology adopted in this study, which set the course for an extensive eleven-step marketing research process adapted from Wiid and Diggines (2015:41) (explained in detail in Chapter 5, section 5.3; see Figure 5.2).

1.8.1 Research philosophy and approach

A research philosophy is used to corroborate the standpoint from which a researcher views the world (Saunders et al., 2016:125). There are five main philosophical approaches to research: positivism, critical realism, pragmatism, postmodernism, and interpretivism. The positivistic paradigm ensures that the methods and principles of science are applied to the study of human behaviour and human events (Brennen, 2017:9). Positivists thus believe that true knowledge can be obtained through observation and can be described from an objective viewpoint (Rahi, 2017:1); the researcher is independent (Adika, 2015:68). This research adopted a positivist paradigm (discussed in Chapter 5, section 5.2.1).

A theory is a standardised research principle used to explain the relationship between two or more concepts and variables, and can be developed using an inductive or a deductive approach (Saunders et al., 2016:148; Rahi, 2017:1). Deductive approaches to research mainly aim at testing theory, while the inductive approach is concerned with generating a new theory that emerges from the data gathered (Adika, 2015:67; Eisend & Kuss, 2019:40). It starts with hypotheses development and testing (Saunders et al., 2016:148; Rahi, 2017:1; Eisend & Kuss, 2019:23). A deductive approach also uses a previous theory extracted from the existing literature in support of a research question to be answered, which is then empirically tested to corroborate or disprove the theory (Saunders et al., 2016:136; Rahi, 2017:1). A deductive theory approach was therefore adopted as relevant to this study (discussed broadly in Chapter 5, section 5.2.2).

1.8.2 Research strategy and process

When conducting research, one can use either quantitative or qualitative methods (Rahi, 2017:1). Qualitative research adopts a subjective approach in order to interpret data (Saunders et al., 2016:165; Rahi, 2017:1), while quantitative research seeks to determine the quantity, the extent of a problem, or the existence of a relationship between aspects of a phenomenon by quantifying the variation (Zikmund & Babin, 2010:94). This study used quantitative methods, as the objective

was to test the hypotheses that the researcher generated. This approach was also used because quantitative methods are grounded in the positivist paradigm, and are used to describe data (Rahi, 2017:1). A descriptive design was also employed, as it focuses on the validity and accuracy of the findings of the research. With a descriptive design, there was an attempt by the researcher to describe systematically the needs and behaviours of consumers (Boateng, 2014:5) (discussed in detail in Chapter 5, section 5.2.3).

According to Rahi (2017:1), 'research strategy' alludes to how a researcher intends to answer the defined research question. Yin (2012:68) noted three research strategies in quantitative studies: experiments, surveys, and case studies. Collis and Hussey (2013:68) explained that a survey is a positivist methodology in which a sample of subjects is drawn from a population and studied to make inferences about that population. A survey strategy was used in this study, therefore, as it employs a deductive approach to collect information in order to validate or disprove a theory (Saunders et al., 2016:181; Rahi, 2017:2). The survey (Internet questionnaire, Annexure 1) was the most relevant strategy for this study, owing to the present COVID-19 global pandemic, because it allowed the garnering of subscribers' perceptions of customer relationship practices in the mobile telecommunications industry through the completing of a web-based questionnaire without having to contact the researcher.

1.8.3 Target population and sample

A population is the larger pool from which sampling elements are drawn, and from which findings can be generalised (Malhotra & Dash, 2011:69; Ragab & Arisha, 2018:11). The population of mobile phone subscribers in Warri, Delta State, and Benin City, Edo State, in Nigeria was used for the study. These populations were chosen for this study because they are one of the most cosmopolitan areas in the southern region of Nigeria, and are major commercial areas that are highly industrialised (World Population Review, 2019; Varrella, 2020). The use of a non-probability snowball sampling method was implemented for this study. This method seemed to be the most efficient and safety-adaptive method to use, because the global COVID-19 pandemic had restricted movements and human contact.

Yaro Yamani's (1967) formula was used to determine the sample size. It is expressed as: $n = \frac{N}{1+N(e)^2}$

where 'N' is the sample size, 'n' is the population size (total number of active subscribers), and 'e' is the sample error (0.05). The population size obtained from the Nigerian National Bureau

of Statistics (2018:20) was 5,333,316 active subscribers in that area. Therefore, $n = \frac{5333316}{1+5333316(0.05)^2}$ = 400 repeat customers (sample size) between the ages of eighteen and sixty-five who patronised the top four telecommunications mobile service providers in Nigeria and with whom the questionnaires were administered. The top four mobile telecommunication providers were the focus, because they held a combined market share of more than 90% (MTN - 37.38%, Glo - 26.80%, Airtel - 26.32%, 9mobile - 9.44%) of the sector (Ogungbade, 2015:270; NCC, 2019:1). A total sample size of 400 respondents was to be used initially, as shown above, however, the responses gotten amounted to 419. During the statistical analysis only 390 fully completed useable questionnaires were considered fit after cleaning the data.

The sample size is consistent with similar previous studies conducted by Lee, Lee and Feick (2001) in the mobile telecommunications industry in France, who suggested a sample size up to 400 as ideal for drawing conclusions. Adika (2015:71) used a similar sample size of 320 in a study of the Ghanaian mobile telecommunications sector (discussed further in Chapter 5, section 5.3.7.2).

Table 1.1: Sampling plan highlighting methodological aspects and phases adopted for this study

Methodological aspect	Phase
Type of research	Quantitative
Research format	Descriptive
Target population	Mobile phone users in Warri, Delta State and Benin City, Edo State, Nigeria, who patronised the top four telecommunications network providers
Sampling units	Male and female respondents aged from 18 to 65 who had a mobile network line from at least one of the top four network providers, and had subscribed or recharged in the previous six months
Time	July to August 2020
Sampling size	400 respondents whose main telecommunications provider was among the top four in Nigeria (MTN, GLO, AIRTEL and 9MOBILE)

Methodological aspect	Phase
Sampling technique	Non-probability snowball sampling
Data collection instruments	Questionnaire adapted from previous studies (see Chapter 5, section 5.3.6.2) and self-completed via a hyperlink on WhatsApp. Google Forms (2020). *Factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry*. Available from: https://forms.gle/Fv5CQiq1UZMTBE1w5. This method was used because the global COVID-19 pandemic discouraged human contact
Data analysis	SPSS version 25.0 AMOS was used to analyse data from the questionnaires

1.8.4 Data collection instruments, sources, and procedure

The study employed a self-completed web-based questionnaire as the instrument for data collection. A questionnaire was used because the study adopted the survey approach and sought to identify the relationships between variables, which was made possible by the use of a questionnaire design. Primary data from the respondents was collected using the snowball sampling method, in which respondents who met the criteria of the screening questions were identified and sent the hyper-link to the questionnaire on WhatsApp. On completing the survey, they were encouraged to send the link to other mobile network subscribers who used any of the top four (MTN, GLO, AIRTEL, and 9MOBILE) mobile network service providers in Nigeria.

Before undertaking the study, the researcher sought informed consent from the respondents about completing the questionnaire. In the covering letter, the respondents were made fully aware of all their rights during a research process, as ethical conduct must be considered according to the established principles of the ICC/ESOMAR 2016 International Code on Market, Opinion, and Social Research and Data Analytics (ESOMAR Guideline, 1994:439; ICC/ESOMAR, 2016). The researcher also obtained clearance from, and followed the ethical guidelines of, the College of Business and Economics Research Ethics at the University of Johannesburg (Annexure 2). The respondents were made aware of what they were required to do to fill in the questionnaire. An information preamble was also provided at the beginning of the questionnaire that provided details about the researcher, the research topic, and the purpose of the study. The demographic questions were structured in such a way that each respondent's identity was not revealed. The respondents were also made aware that the

research was purely for academic purposes, and that their anonymity and responses would thus be safeguarded. Those who agreed to participate in the research were given access to the questionnaire to complete. The collection of the primary data took place from July to August, 2020 (a cross-sectional approach) (discussed in detail in Chapter 5, section 5.3.5).

The questionnaire was divided into three sections. Section A sought the demographics of the respondents: their gender, age, how many SIM cards they had, the name of the mobile telecommunications operator they primarily used, how long they had been with their mobile network provider, what mobile service they spent more on, and the amount spent on mobile services. Section B measured the customer relationship management variables of customer service (adopted from Jere & Mukupa, 2018:123; Nekmahmud & Rahman, 2018:359; and Dey, Al-Karaghouli, Minov, Babu, Ayios, Mahammad & Binsardi (2020:7), price fairness (adopted from Iyer, Davari & Paswan, 2016:51), network quality (adopted from Jere & Mukupa, 2018:124), diversity of products (adopted from Matt, Hess & Weiß, 2019:1550 and Kundu & Mor, 2017:170), and overall service quality (adopted from Koi-Akrofi, Koi-Akrofi & Welbeck 2013:90). Section C measured the respondents overall level of satisfaction, relationship intentions, and customer loyalty. The items used in this section were adopted from previous studies: satisfaction (adopted from Gupta & Sahu, 2015:385-386), trust (adopted from Ofori et al., 2018:598), commitment (adopted from Minta, 2018:28), switching costs (adopted from Palamidovska-Sterjadovska & Ciunova-Shuleska, 2017:205), and customer loyalty (adopted from Rather, 2018:14). The items were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The five-point Likert scale was used to avoid ambiguity, as it aids easier understanding and expression. The validity of the scale was achieved by adopting the questions in the questionnaire from relevant supporting literature, that had also made use of the five-point Likert scale.

The study was also validated through a pilot test of the questionnaire on 30 respondents who were similar to the sample population, before the actual data collection process (Wiid & Diggines, 2015:174). The questionnaire was administered by the researcher via a WhatsApp hyper-link. Respondents comments and suggestions about the wording of questions, whether the questionnaire was easy to complete, and whether any of the sections were confusing were noted and incorporated to make the questionnaire simpler and easier to understand for those who would take part in the final survey (Burns & Bush, 2014:229) (refer to Chapter 5, section 5.3.6.3). Those who took part in the pilot study were not included in the final survey.

1.8.5 Data analysis and procedure

Before processing the responses, the completed questionnaires were sorted, checked and edited for completeness and consistency (Clow & James, 2014:360). The realisation rate was calculated to be 93.1%, after which the demographic profile and cellphone patronage behaviour of the respondents were discussed (refer to Chapter 6, section 6.4). The University of Johannesburg's Statistical Consultation Service (STATKON) assisted with the initial data analysis, using the Statistical Package for Social Sciences (SSPS) and IBM Analysis of Moment Structures (AMOS). As part of the descriptive analysis, the frequency distribution, mean, standard deviation, skewness and kurtosis of the results for each questionnaire statement item were examined to ensure that the data was normally distributed and fit for subsequent analysis (Malhotra, 2010:488) (refer to Chapter 6, section 6.5). The suitability of the data was confirmed using sample size and how strongly each item related to the others (Pallant, 2010:187), and the strength of the relationship between the items was considered using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (refer to Chapter 6, section 6.6.2). These measures indicated that the data was suitable for factor analysis.

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used as the measurement models of the survey data's validity (Hair, Black, Babin & Anderson, 2010:661) (explained in detail in Chapter 6, sections 6.6.3 and 6.6.4 respectively). Hair et al. (2010:99) explained that the purpose of EFA is to examine the data by relating all the measured variables to each factor using a factor loading estimate. Confirmatory factor analysis (CFA) deals with how well the measured or observed variables represent the latent variables (Saroha & Diwan, 2020:664). Reliability was examined using Cronbach's alpha test (refer to Chapter 6, section 6.7). Structural equation modelling (SEM) was then used to examine the structural component of the measurement and the structural model (Hult, Hair, Proksch, Sarstedt, Pinkwart & Ringle, 2018; Mahmoud et al., 2018:265) (refer to Chapter 6, section 6.10). SEM is a comprehensive statistical approach that is used to test the relationships among observed and latent variables (Hoyle, 1995). After SEM had been conducted, the relationships between the mediation effect between satisfaction, trust, commitment, low switching costs and loyalty and their hypotheses were tested, and confirmed or rejected (refer to Chapter 6, section 6.10.4). This was carried out using the PROCESS version 3.5 add-on for SPSS Model 4.

1.9 CONCLUSION

The need for mobile network providers in the Nigerian telecommunications industry to differentiate themselves from their competitors has become increasingly prevalent, as the industry has become more competitive and characterised by high switching behaviour (Nauroozi & Moghadam, 2015:96; Hajar et al., 2020:69). Therefore, to understand consumers' behaviour, remain competitive, and retain customers in this market, Nigerian mobile operators have to anticipate and deliver on the factors that influence customer satisfaction and loyalty. Having such knowledge and understanding will encourage the managers of mobile telecommunications companies to adopt innovative customer-centric marketing strategies, such as customer relationship management, which will help to develop long-term and mutually satisfying relationships with their key customers.

This chapter discussed the introduction and background to the study, and established the problem statement. It also provided the objectives of the study (primary and secondary) and its significance. Chapter 2 provides more clarity on the telecommunications industry globally, in sub-Saharan Africa, and in Nigeria (the focus of the study), while Chapters 3 and 4 focus on the theoretical underpinnings of this study and the adopted factors that influence customer satisfaction and loyalty.

CHAPTER 2

THE TELECOMMUNICATIONS INDUSTRY

2.1 INTRODUCTION

The purpose of this chapter is to provide an overview and background to the development of the telecommunications industry globally, in sub-Saharan Africa, and in Nigeria - the focus of this study. The chapter starts by giving insight into the global telecommunications industry, telecommunications growth in sub-Saharan Africa, and the evolution of the telecommunications industry in Nigeria. The chapter also highlights the role of the mobile telecommunications sector in Nigeria and current trends in the industry. It provides a profile of the regulatory bodies in the Nigerian telecommunications industry and the main mobile telecommunications operators in Nigeria. It concludes by presenting the challenges faced by Nigerian mobile network operators and the future outlook of the Nigeria mobile telecommunications industry.

2.2 THE GLOBAL TELECOMMUNICATION INDUSTRY

The global business scene has shifted its focus since the industrial era to consumer services (Yaqub et al., 2019:62), with the telecommunications industry emerging as one of the rapidly growing and competitive industries ahead of banking and other service sectors (Nekmahmud & Rahman, 2018:340), recording a 0.62% annual growth rate in 2019, and forecast to hit 1.23% by 2021 (Statista, 2019). The growth of telecommunications and of information and communication technology (ICT) has impacted human existence by making information dispersion fast and convenient (Ofori, Osei, Ato-Mensah & Affum, 2015:157). The evolution and advancement of the global telecommunications industry over the past four decades can thus be attributed to the incredible technological development of wireless, mobile communication systems, and governmental deregulation policies such as the Nigerian Communications Act of 2003 which have played an important role in the socio-economic growth and development of both developed and developing nations (Ofori et al., 2015:157). The telecommunications industry has also played a crucial role in influencing the growth and evolution of other sectors such as education, agriculture, finance, e-governance, rural development, and health (Nekmahmud & Rahman, 2018:341; Yaqub et al., 2019:63).

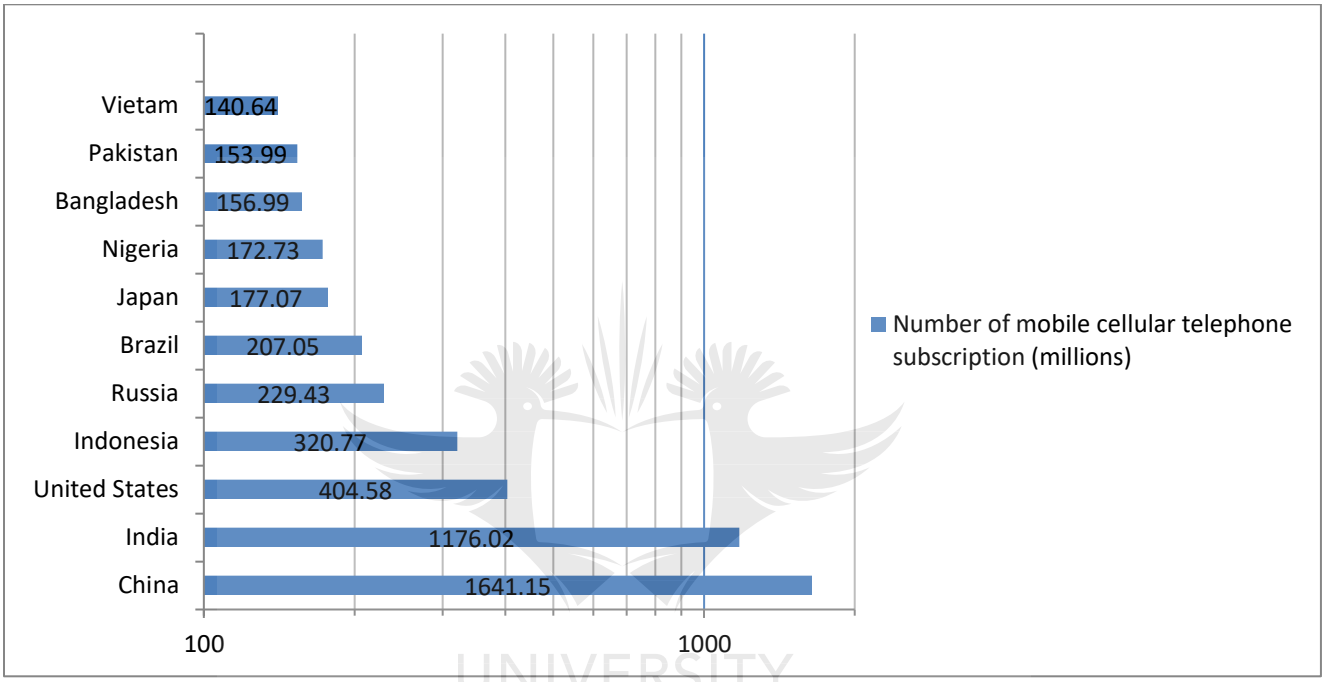
Telecommunications consist of fixed line (telephones connected by cable) subscribership, which was associated for years with economic growth (Ward & Zheng, 2016:89), and mobile telephone (wireless telephones that are fully portable and not attached to a base unit) services, which are now the preferred mode of access for consumers, especially in developing countries (Nekmahmud & Rahman, 2018:340). In an emerging country such as Nigeria, there are 173,670,035 mobile users (85% of the total population) on different mobile networks, while fixed line subscribership stands at 107,250 (0.05%) (NCC, 2019:1). ITU (2018) estimated wireless telecommunications spending worldwide at $844bn, while worldwide voice telecommunications spending was $525bn. This shows a decline by 48% on fixed-telephone subscriptions, while mobile cellular telephone subscriptions continue to grow rapidly, reaching $1.06tn in 2019 (GSMA; Statista estimates, 2020). In 2018, mobile operators and their supporting structures (i.e., suppliers of hardware, software, and content creators, who all benefit from the development of mobile telecommunications) provided both direct and indirect employment to 32 million people globally (The Mobile Economy, 2019:20). And mobile support systems and their ancillaries contributed more than $500 billion in general taxes to public sector funding (The Mobile Economy 2019:22).

The mobile telecommunications industry has experienced a stream of rapid changes in its structure, techniques, strategies, application, and technological environment in the last decade (Al Dmour, Alshurideh & Shishan, 2014:172; Alshurideh, 2016:64). This has prompted telecommunications companies to seek out customer-oriented and, innovative marketing strategies and policies in order to attain competitive advantages that provide beneficial services to subscribers (both prepaid and contract) worldwide (Rahman & Masoom, 2015:97). The top ten telecommunications companies globally (AT&T - USA, Verizon - USA, China Mobile - China, NTT - Japan, Deutsche Telekom - Germany, Softbank - Japan, Telefonica - Spain, America Movil - Mexico, China Telecom - China and Vodafone - UK) (ETNO, 2019:23) have a combined market value of over $50 billion (Nekmahmud & Rahman, 2018:343). Mobile telecommunications, meanwhile, continues to make an essential contribution to socio-economic growth worldwide. Mobile technology and services produced $3.9 trillion in economic value (4.6% of GDP) in 2018, with mobile operators accounting for 60% ($1.07 trillion) globally in 2018, from $1.03 trillion in 2016 compared with 2.2% in 2015, thus showing a consecutive annual rise in revenue growth (Nekmahmud & Rahman, 2018:340; The Mobile Economy 2019:3).

Figure 2.1 shows the countries with the highest number of mobile cellular telephone subscriptions in 2018 (in millions), adopted from the International Telecommunication Union (ITU) report (2019),

indicating that Nigeria is among the top countries by number of mobile cellular subscriptions in 2018. Nigeria follows China, India, the United States of America, Indonesia, Russia, Brazil, and Japan, and is ahead of Bangladesh and Pakistan. China has registered the highest number, with more than 1.64 billion mobile cellular subscriptions (112%).

Figure 2. 1: Countries with the highest number of mobile cellular telephone subscriptions in 2018 (in millions)



Source: International Telecommunication Union (2019)

The International Telecommunication Union (2019) reported that, at the end of 2018, a total of 8.1 billion people around the world had mobile phone connections, compared with a total of 7.8 billion subscribers at the end of 2017. Unique mobile phone subscribers (an individual who can account for multiple mobile phone connections i.e., SIM cards) stood at 4.8 billion, accounting for 67% of the global population, compared with 65% in 2017, and forecast to hit 71% between 2018 and 2025 (ITU, 2018; Nekmahmud & Rahman, 2018:340; The Mobile Economy, 2019:3). A major portion of this increase occurred in developing countries, especially African countries, as they have the world's fastest-growing telecommunications sector (World Bank, 2012). According to the International Telecommunications Union (ITU, 2008), 28 African countries (52%) lacked a mobile telephone network in 1995, compared with just six countries (11%) in 2000, and none after 2006 (ITU, 2008; Aker & Mbiti, 2010:208; Cleeve & Yiheyis, 2014:547). By 2012, 650 million mobile phone subscriptions were registered in Africa (World Bank, 2012). Currently, about 836 million

mobile phone subscriptions are registered in Africa (ITU, 2019). These developments have led to expanded access to telecommunications services, making Africa the second-fastest growing region in the global market for telecommunications (World Bank, 2012). The Mobile Economy (2019:3) also states that of the 710 million people projected to subscribe to mobile phone services worldwide for the first time in the next seven years, half will come from the Asia-Pacific region, and just under a quarter will come from sub-Saharan Africa. The predicted steady economic growth and a growing young population are providing sub-Saharan Africa a real opportunity for growth in sectors such as mobile telecommunications (World Bank, 2016; Amankwah-Amoah, Boso & Debrah, 2018:551). In addition, the widespread use of cell phones, and increasing deregulation, and reduced connectivity costs have opened up new opportunities for telecommunications companies seeking growth in the region (Amankwah-Amoah et al., 2018:551).

2.3 THE TELECOMMUNICATIONS INDUSTRY IN SUB-SAHARAN AFRICA

The telecommunications sector in sub-Saharan Africa (SSA) has been restructured over the last 10 years (Bresson & Bisson, 2011:50). In the mid-1990s, the telecommunications operations launched by the Western operators in sub-Saharan Africa were limited, and the market was seen as unprofitable, with its general poverty and inequality levels among the highest globally (Bresson & Bisson, 2011:50). However, the telecommunications sector has experienced a rapid transformation that has not only brought investment opportunities, but also changed the use and function of mobile phone communication (Cleeve & Yiheyis, 2014:548). Although sub-Saharan Africa still lags in development, countries in the region have given special attention to the growth and development of telecommunications and its infrastructure (Haftu, 2019:89). Investments, mobile technology innovations, and different deregulation policies by governments of this region have also shown substantial growth in the telecommunications industry, which is a vital sector and a major driver of economic growth (Aker & Mbiti, 2010:208; Chavula, 2013:5; Donou-Adonsou, Lim & Mathey, 2016:66). In sub-Saharan Africa, mobile technologies and services produced 8.6% of GDP in 2018 - a contribution equivalent to over $144 billion of economic value added in 2018 (The Mobile Economy sub-Saharan Africa, 2020:3). The mobile operating structures and ancillaries provided almost 3.5 million jobs (directly and indirectly) and made a significant contribution of almost $15.6 billion to public sector funding through taxation (The Mobile Economy sub-Saharan Africa, 2020:3).

The sector in sub-Saharan Africa has expanded from under 16 million cell phone users in 2000 to over 456 million unique mobile phone network subscribers in 2018 (Cleeve & Yiheyis, 2014:547; The Mobile Economy sub-Saharan Africa, 2020:2), which is an increase of 20 million from 2017, and represents a subscriber penetration rate of 44% (The Mobile Economy sub-Saharan Africa, 2020:2). However, it is noteworthy that mobile phone network subscription figures may not be able to account for the actual number of mobile phone users because global system for mobile (GSM) communications owners in this region own more than one handset or possess multiple SIM cards (Cleeve & Yiheyis, 2014:548). The Mobile Economy sub-Saharan Africa (2020:2) reports that, at the end of 2018, SIM connections were tagged at 774 million, with 239 million people equivalent to 23% of the sub-Saharan population also using mobile Internet regularly.

The sub-Saharan network provider market is fragmented, with 150 operators in 46 African countries, and with five major groups among them (MTN, Orascom, Vodafone, Orange and Airtel) (Bresson & Bisson, 2011:51). With a compound annual growth rate (CAGR) of 4.6%, and an additional 167 million projected subscribers over the period to 2025, sub-Saharan Africa remains the fastest-growing region (The Mobile Economy sub-Saharan Africa, 2020:2). This will take the total subscriber base to just over 600 million by 2025, representing around half the population of sub-Sahara Africa. Nigeria and Ethiopia will record the fastest growth rates between now and 2025, at 31% and 18% respectively (The Mobile Economy sub-Saharan Africa, 2020:2). The Nigerian telecommunications industry is currently considered the leading mobile telecommunications market in sub-Saharan Africa in terms of subscribers' base, tele-density, and inflow of Foreign Direct Investment (Izogo, 2016:746; The Mobile Economy sub-Saharan Africa, 2020:2; NCC, 2019). It is the eighth fastest-growing telecommunications market in the world, up from tenth place in 2015 (ITU, 2019; Omenugha, 2015:553). This specific industry is discussed in more detail in the next section.

2.4 THE EVOLUTION OF THE NIGERIAN TELECOMMUNICATION INDUSTRY

The development of telecommunications in Nigeria began in 1886, and was developed and managed by the colonial powers to subjugate the indigenous population for almost a century (Akingbade, 2014:147; Oluwatoyin, 2015:75). It was aimed at performing administrative functions rather than at commercial or economic development; the provision of a substantial telecommunications network was such that the total number of telephone lines at independence in 1960 was only 18,724 for a population estimated at about 40 million people (Akinyemi & Ramonu, 2018:70).

Nigeria, which was just beginning its development journey on attaining independence in 1960, undertook measures to grow its economy (Chidozie, Odunayo & Olutosin, 2015:173; Oluwatoyin, 2015:75). As a result, the government established state-owned enterprises (SOEs) in various sectors of the economy, such as telecommunications, power, aviation, petroleum, the media, and transportation (Chidozie et al., 2015:173; Obasa, 2018:9). However, these SOEs proved to have an adverse effect on the economic development of Nigeria, as they were characterised by corruption, excessive bureaucracy, defective capital structures, incompetent management, complacency, outdated technology, and nepotism (Chidozie et al., 2015:174; Akinyemi & Ramonu, 2018:70; Obasa, 2018:10). This prompted the deregulation and privatisation of the Nigerian economy.

2.4.1 The deregulation of the Nigerian telecommunications sector

In effect, the establishment of the Technical Committee on Privatization and Commercialization (TCPC) in 1988 to oversee the privatisation programme launched the deregulation of the Nigerian economy (Akingbade, 2014:147). This was successfully carried out by the TCPC, which privatised 88 of the 111 state-owned enterprises (Iyoko & Uwaifo, 2018:8). The Nigerian telecommunications sector was one of the sectors that experienced deregulation (i.e., the reduction of government restrictions on policies). However, in 1993, based on the recommendation of the TCPC, the Federal Military Government enacted The Bureau of Public Enterprises Act, which specified the removal of subsidies and a reduction in wage bills, which revoked the 1988 Act (Chidozie et al., 2015:174; Obasa, 2018:13); and in 1999, the Federal Government declared the Public Enterprise (Privatization and Commercialization) Act, which focused on the sale of government shareholdings in eight Public Enterprises, the adoption of a new National Telecommunications Policy (which opened the sector fully to competition in 2001), and the creation of the National Council on Privatisation (NCP) to implement and refurbish the programme (Obasa, 2018:13; Iyoko & Uwaifo, 2018:8). It is therefore noteworthy that the process of deregulating Nigerian Telecommunications Limited (NITEL) began in 1988 with the commercialisation of the operations of the enterprise primarily to boost competency and productiveness in the sector (Obasa, 2018:14).

However, NITEL, the only national carrier, became synonymous with problems of corruption, mismanagement, inefficiency in service delivery, congested lines, erratic behaviour towards customers, and unaffordability (Chidozie et al., 2015:178; Nwachukwu & Onyenankeya, 2017:172; Akinyemi & Ramonu, 2018:70). The available telephone services, whether on fixed or mobile platforms, were considered unreasonably overpriced and inaccessible to many Nigerians

(Akingbade, 2014:147; Nwachukwu & Onyenankeya, 2017:172). The immediate result was a public outcry for the government to address the volatile telephony services of NITEL (Akingbade, 2014:147). The Nigerian government moved swiftly into action to complete the deregulation of the telecommunications sector, hence the enactment of Decree 75 of 1992, which led to the formation of the regulatory body in the sector, the Nigerian Communications Commission (NCC), as part of government's response to the challenges of NITEL (Chidozie et al., 2015:178; Oluwatoyin, 2015:75; Eke, 2020:1). The NCC began operations in 1993, while full deregulation and privatisation of the sector began in 2000 (Abdul, Salman, & Olota, 2014:139; Eke, 2020:1). Since then, the telecommunications sector in Nigeria has seen an enormous inflow of investments and significant growth, and development.

2.4.2 Emergence of the Nigerian Communications Commission

The formation of the Nigerian Communications Commission brought about the complete deregulation of the Nigerian telecommunications industry in 2000 by modernising and broadening the mobile telecommunications network and services by awarding mobile network licences (Abdul et al., 2014:139; Eke, 2020:1). The mobile phone network cellular licensing and auctioning process was begun in December 2000 after credible bidders had been invited (Oluwatoyin, 2015:76). Four operators - ECONET (now Airtel), a Zimbabwean consortium; MTN, a South African-owned mobile network company; and Communications Investment Limited (CIL), a Nigerian Company - emerged from this process as successful bidders (Iwuagwu, 2014:662; Nwachukwu & Onyenankeya, 2017:172). Each agreed to pay a $285 million licence fee for a 15-year operating licence, with a five-year exclusivity period (Iwuagwu, 2014:662; Oluwatoyin, 2015:76). The fourth licence was allocated to NITEL and its mobile network subsidiary MTEL (Iwuagwu, 2014:66; Nwachukwu & Onyenankeya, 2017:172). Each licencee was also obliged to reach a subscriber base of 1.5 million lines by the end of the five-year exclusivity period (Iwuagwu, 2014:662; Adebisi et al., 2020:36). CIL eventually had its licence revoked after failing to pay the licencing fee by the specified deadline (Iwuagwu, 2014:662). CIL's revoked licence was re-auctioned as part of the second national carrier licence in August 2002; this was won by GLOBACOM Limited, a fully owned Nigerian company, at a bid price of $200million (Akingbade, 2014:148; Chidozie et al., 2015:178; Okoro & Barikui, 2017:92). The licencing auction approach was deemed a great achievement, and the Nigerian government was able to raise $855 million from it (Iwuagwu, 2014:662). In fact, in the history of Africa's telecommunications licencing, the amount raised was clearly remarkable. It is also hinted that this finally unlocked the door to full

private sector involvement in the Nigerian mobile telecommunications industry (Iwuagwu, 2014:662).

A landmark in the reform of Nigeria's telecommunications industry came on July 8th, 2003, when former President Olusegun Obasanjo signed into law the Nigerian Communications Act, which further empowered the NCC to operate as the independent regulator of the industry (Iwuagwu, 2014:662; Okoro & Barikui, 2017:91). In fact, it was alleged that multiple flaws in Decree 75 of 1992 (which set up the Nigerian Communication Commission) had hindered its effective operation as an independent regulator, and denied the NCC the power to resolve problems of interconnectivity between various operators (Iwuagwu, 2014:663). It was these setbacks that prompted the enactment of the Communications Act of 2003, which gave full regulatory powers to the NCC, and thus resolved the observed inadequacies while encouraging efficiency, transparency, and accountability (Familusi, 2005:34; Iwuagwu, 2014:663).

By 2006, after the five-year exclusivity period granted to the initial network operators had elapsed, other companies were issued with Unified Access Service Licences (UASL) (Iwuagwu, 2014:663). Early in 2007, another spectrum slot in the 900MHZ band was won by VISAFONE, a Nigerian company (Iwuagwu, 2014:663). Also in 2007, a fifth GSM network provider spectrum licence was awarded to Emerging Markets Telecommunication Services (EMTS, Mubadala), a United Arab Emirates (UAE) company with some Nigerian partners, trading under the business name ETISALAT (now 9mobile) (Akingbade, 2014:148; Chidozie et al., 2015:178).

All these activities intensified and fostered the existing competition in the industry, which encouraged the prompt reduction of telephone rates and connection charges in the industry, resulting in accelerated growth in mobile phone subscriptions. It is essential to observe that, in the four decades from 1960 to 2000, connected lines grew at only 10,000 per annum, while in 2001 and 2002, an estimated increased growth rate of one million lines per annum was recorded (Iwuagwu, 2014:663). The combined number of subscribers then rose exponentially, with a subscriber rate of 139,143,610 in December 2014, increasing to 173,670,035 in 2018 an increase of 25.05% (NCC, 2019:1). This has made the Nigerian telecommunications industry the largest and fastest growing in Africa (Izogo, 2016:746), and the eighth fastest-growing telecommunications market in the world (ITU, 2019). Mobile network subscribers thus now have multiple service provider options to choose from, owing to the successful deregulation and globalisation of the Nigerian telecommunications industry (Opele et al., 2018:1099). Along with this growth in subscribers and competitors came a boom in private investment in the sector. By

June 2003, investors had injected $2.55 billion into the sector a remarkable 500% growth in investment from just $50million at the end of 1999 (Iwuagwu, 2014:663). According to reports by the NCC, telecommunications contributed 10.43% to Nigeria's gross domestic product (GDP) in the second quarter of 2018, estimated at N1.6 trillion ($4.4 billion), compared with 7.41% in the third quarter of 2017 (NCC, 2019:1). This shows the massive economic and developmental contribution of the Nigerian mobile telecommunications industry to the economy. The relevance of this industry is not only related with connectivity and economic growth: its contribution to the growth of numerous sectors - such as finance, agriculture, and health has also been exponential (Cleeve & Yiheyis, 2014:548; Chidozie et al., 2015:180; Asongu & Nwachukwu, 2016:7; Adebisi et al., 2020:36).

2.4.3 The role of the mobile telecommunications industry in Nigeria

Since the deregulation of the Nigerian telecommunications sector, it has recorded high levels of economic growth and development, particularly with respect to the Nigerian economy (Chidozie et al., 2015:179). The deregulation of the telecommunications sector has also resulted in job creation and sustainable livelihoods, the enhancement and development of other sectors, improved infrastructure as a result of foreign direct investments, bridging of rural-urban divide, strengthened security, building of social platforms, and the reduced risk and cost of travel (Chidozie et al., 2015:179; Bakare, Ekanem & Allen, 2017:99). Each of these is discussed further below.

- **Economic growth and development:** The growth and development of telecommunications has received special attention globally, as advances in this sector have been found to contribute significantly to economic growth; and Nigeria is no exception (Ward & Zheng, 2016:89; Haftu, 2019:88). Haftu (2019:88) argued that, compared with traditional infrastructure, telecommunications infrastructure has the potential to advance development in developing countries. A look at the economic benefits of the telecommunications sector in Nigeria shows a contribution of N400 billion ($1.1bn) paid in taxes in 2012, with network providers being charged N160 billion ($441m) in taxes annually and N55 billion ($151m) as additional regulatory levies (Ogunsanya, 2013; Chidozie et al., 2015:180). Since 2001, about N640 million ($1.7m) has been paid in the form of licences and spectrum fees, with other contributions in the form of payments for corporate social responsibility (CSR) programmes (Chidozie et al., 2015:180). According to reports by the NCC, telecommunications contributed 10.43% to Nigeria's

gross domestic product (GDP) in the second quarter of 2018, estimated at N1.6 trillion ($4.4 billion).

- **Job creation and sustainable livelihoods:** The impact of the mobile telecommunications sector on job creation is a major contributor to the economy (Chidozie et al., 2015:180). Firms in the Nigerian telecommunications industry source employees from graduates and undergraduates, with skilled and unskilled workers operating as fibre-optic technicians, testing engineers, graphic designers, call centre attendants, sales promoters, and social media influencers (Oghojafor, Ladipo, Ighomereho & Odunewu, 2014:16; Nwachukwu & Onyenankeya, 2017:172), creating an estimated 2.5 million jobs in the last decade (Okoro & Barikui, 2017:92; Nkordeh, Bob-Manuel & Olowononi, 2017:3). Telecommunications mobile stands and recharge card businesses are very easy to start and are cost-effective, as ownership of a mobile phone can create a business opportunity and a means of livelihood (Cleeve & Yiheyis, 2014:548; Bakare et al., 2017:100). The telecommunications sector has also led to the development of extensions that involve lots of members, ranging from contractors to phone booth operators, mobile phone sellers, system integrators, app and content creators - they all benefit from the activities in the mobile telecommunications sector (Adeyanju, 2012; Ogunsanya, 2013; Chidozie et al., 2015:180; Ghosh, 2016:1023).

- **Enhancement and development of other sectors:** Many international organisations, including the United Nations and the World Bank, have advised developing countries to deploy ICT (Information and Communications Technology) in sectors such as, security, health, insurance, agriculture, transportation, education, and government agencies (Asongu & Nwachukwu, 2016:7; Haftu, 2019:88; Adebisi et al., 2020:36). In Nigeria, service sectors such as health, education, and banking have had their operations made more efficient and easier to use with mobile ICT- enabled products and apps such as e-health, distance learning, e-payment, and mobile banking (UNDP, 2012; Cleeve & Yiheyis, 2014:548; Chidozie et al., 2015:180; Asongu & Nwachukwu, 2016:7) from the telecommunications sector. The wholesale adoption of GSM technology has also had a positive impact on service delivery and turnaround time, particularly for small and medium-sized enterprises, which have continued to leverage GSM marketing platforms to expand their customer base. (Nwachukwu & Onyenankeya, 2017:172).

- **Infrastructural development:** Another major role played by telecommunications in Nigeria since its deregulation is infrastructural development. In the course of their operations, mobile network providers have contributed to and invested immensely in network expansion, access to rural areas, and provision of basic amenities in various parts of the country (Chidozie et al., 2015:180; Bakare et al., 2017:100). The operators have built backup networks to improve their services, including the construction of roads to access core network facilities and a power supply network (Chidozie et al., 2015:180; NCC, 2019). For instance, MTN, which has the largest infrastructure in the sector, has invested in fixed assets and facilities nationwide at an estimated cost of $7 billion (Chidozie et al., 2015:180; MTN, 2019). Since the acquisition of Airtel (previously Zain) in 2010, Airtel Nigeria has invested $1.5 billion in infrastructure (Ogunsanya, 2013; Chidozie et al., 2015:180). Globacom recently began network upgrade projects with the installation of over 80 new base stations, which required the construction of new switching centres to relieve network saturation (MarketLine, 2017:22; Glo, 2019). It has also set up three mini call centres to improve customer service (Oketola & Opara, 2013; Chidozie et al., 2015:180). All these efforts have helped to develop of technological infrastructure and have contributed to the economy financially.

- **Bridging the urban-rural divide:** The affordability of mobile phones and SIM cards from mobile network providers has totally changed the social order (Omiunu, 2017:45). It has enabled the spread of telephone services across all areas and regions, thus bridging the gap in the economic, social, and political interactions between residents in urban and rural areas (Omiunu, 2017:45; Nwachukwu & Onyenankeya, 2017:172; Deloitte, 2021). In other words, the disparity caused by the urban-rural divide is reduced, which then encourages the economic development of the country in all regions (Ijewere & Gbandi, 2012:195).

- **Security:** With the Internet and mobile networks, the security system has been improved with the introduction of compulsory SIM registration by the NCC and having biometric and personal data of subscribers stored in a database. This is a good step in the right direction to reduce incidences of robbery and kidnapping, and is a convenient way to track vehicles (Obodoeze, Okoye, Mba, Asogwa & Ozioko, 2013:5). This stored data can be used later to trace and apprehend the perpetrators. As noted by Nwachukwu and Onyenankeya

(2017:172), the widespread use of mobile phones has drastically reduced criminal activity, as individuals can now safely and swiftly alert security operatives of ongoing or intended criminal activities in their environment (Bakare et al., 2017:100).

- **Mobile/social media:** The mobile phone has become an integral part of users' activities in their daily lives, as it is replacing the photo album, radio, cassette player, and video player (Omiunu, 2017:45). With the Internet, one can subscribe to mobile TV and social media platforms such as Twitter, Instagram, and Facebook (Okoro & Barikui, 2017:92). Most people use their mobile phone for social contact to communicate, and relationship skills are being improved over social networks and apps, as some subscribers have built unique attachments to their devices (Omiunu, 2017:45; Okoro & Barikui, 2017:92).

- **Reduced risk and cost of travel:** The introduction of the GSM network in Nigeria has reduced the risk of travelling and accidents, as the road network in Nigeria is still poor (Ijewere & Gbandi, 2012:195; Adebisi et al., 2020:36). People do not have to travel long distances to deliver a message, since they can now sit in the comfort of their homes and communicate with anyone in a distant place or country (Obodoeze et al., 2013:5). The money spent on such a journey is saved and the risk of a road accident averted (Ijewere & Gbandi, 2012:195; Adebisi et al., 2020:36). Cheap intercontinental calls and roaming in other countries are cheap over the GSM network service, which is flexible (Bakare et al., 2017:100).

2.5 NIGERIAN TELECOMMUNICATIONS REGULATORY BODIES

Nigeria's communications environment is mostly regulated by government agencies, which are discussed in the next section.

2.5.1 Federal Ministry of Communications and Digital Economy Nigeria

The Federal Ministry of Communications and Digital Economy was created in 2011 as the Ministry of Communication Technology (MoC, 2019). Its objective was to facilitate ICT as a key tool in the areas of job creation, economic growth, and transparent governance (FMoCDENigeria, 2019). The Ministry of Communications (FMoCDENigeria) exists to facilitate and provide effective access to communication infrastructure throughout the country, promote the use of ICT in all sectors through digital content creation and domestic software applications, and the delivery of private

and public services over the Internet (FMoCDENigeria, 2019). The Federal Ministry of Communications has other agencies - such as the Nigerian Communications Commission (NCC), the National Information Technology Development Agency (NITDA), the Nigerian Postal Services (NIPOST), Nigerian Communications Satellite Ltd (NIGCOMSAT), and Galaxy Backbone established by the Federal Government of Nigeria to operate a nationwide Internet protocol-based network (FMoCDENigeria, 2019).

2.5.2 Nigerian communications commission

The Nigerian Communications Commission (NCC) is the independent national regulatory authority for the telecommunications industry in Nigeria, established by Decree 75 of 1992 (NCC, 2019). It began operating in 1993 (Oluwatoyin, 2015:75; NCC, 2019). The aim of this commission is to monitor the evolution of competition in the sector, to prevent hostility towards new entrants by those already in the market, and to protect the public from market abuse by companies through practices such as inflated prices and the reduced quality and quantity of services provided (Chidozie et al., 2015:178; NCC, 2019). The NCC is also responsible for licencing telecommunications operators, promoting private sector involvement and investment, controlling tariffs, settling interconnection disputes, overseeing network technical and operational standards and practices, and other industry-related matters; and it is meant to perform these functions without bias and with complete autonomy, on the basis of transparency, equity, and fairness (Chidozie et al., 2015:178; NCC, 2019). Section 3 of the Nigerian Communications Act (NCA) 2003 gave the NCC the power to inspect of the licencees' accounts, and, to summon any persons or bodies to appear before the commission in cases of dispute or wrongdoing (Abdullahj et al., 2015:3).

Over the years, the NCC has earned a reputation as the foremost telecommunications regulatory agency in Africa (NCC, 2019), as it facilitated the establishment of the West African Telecommunications Assembly (WATRA), which it has continued to nurture and support, and is also very active in the African Telecom Union (ATU), the Commonwealth Telecommunications Organisation (CTO), and the International Telecommunications Union (ITU) (Ndukwe, 2011:11-12). The Commission has catalysed the use of ICT's for different aspects of national development by initiating several programmes, such as the State Accelerated Broadband Initiative (SABI) and the Wire Nigeria Project (WIN), to help stimulate demand and accelerate the uptake of the ICT tools and services necessary for the creation of a knowledge society in Nigeria (NCC, 2019).

2.5.3 National Information Technology Development Agency

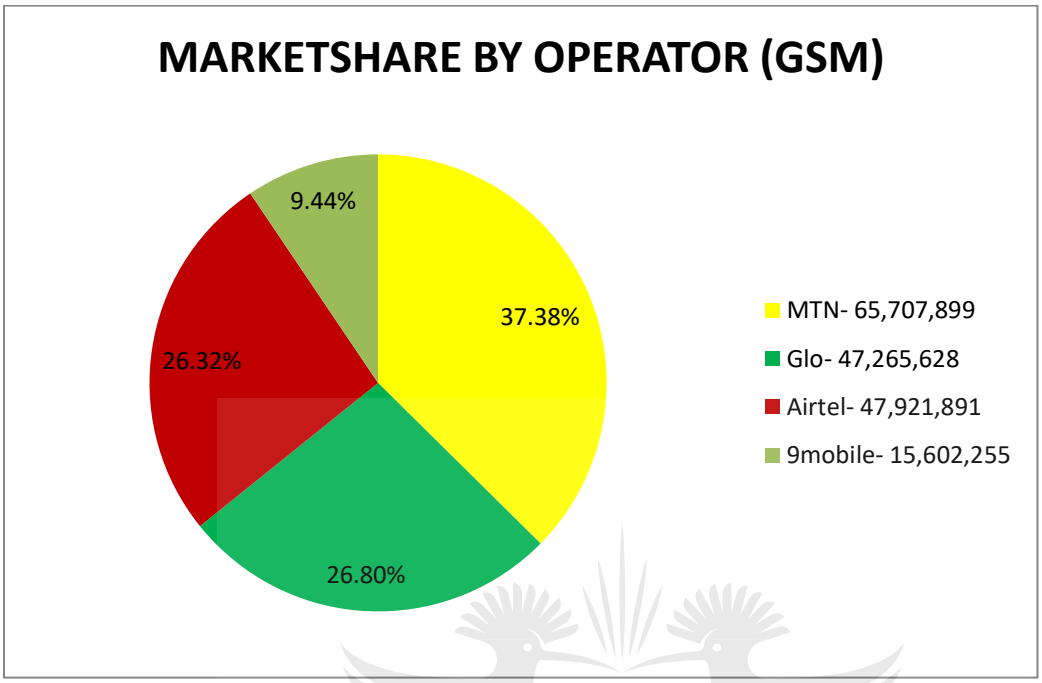
The National Information Technology Development Agency (NITDA) was created in April 2001 to implement the Nigerian information technology policy and to co-ordinate general IT development in the country (NITDA, 2019). The National Information Technology Development Act (2007) provides a framework for the planning, research, development, standardisation, application, coordination, monitoring, evaluation, and regulation of information technology practices, activities, and systems in Nigeria (NITDA, 2019). NITDA is also the clearing house for all IT projects and infrastructural development in the country (NITDA, 2019). It is the prime agency for e-government implementation, Internet governance, and general IT development in Nigeria (NITDA, 2019). NITDA actualises its mammoth mandate through strategic and inclusive stakeholder management, local and international partnerships, and the efficient use of resources in the interests of Nigeria (NITDA, 2019).

The regulatory bodies in the Nigerian mobile telecommunications sector have been able to regulate different aspects of the market not only to provide subscribers with fair and adequate services, but also to ensure that there is a conducive competitive environment for the major mobile network providers in Nigeria (MTN, Globacom, Airtel and 9mobile).

2.6 MAIN MOBILE OPERATORS IN THE NIGERIAN TELECOMMUNICATIONS INDUSTRY

The telecommunications industry in Nigeria is competitive one, comprising of four major companies (As shown in Figure 2.2 below) with a combined market share of more than 90% (MTN-37.38%, Glo-26.80%, Airtel-26.32%, 9mobile-9.44%), while the rest of the competitors namely M-Tel, Visafone, Starcomms and Multi-links share the remaining 10% (Adekitan, 2014:11; Ogungbade, 2015:270; Opele et al., 2018:1099; NCC, 2019). The economic impact and large population show that the Nigerian mobile telecommunications market is competitive for its network providers. These companies all strive to expand their market share and sales volume, minimise costs, be responsive to customers' needs, and ultimately increase their profit. Consequently, providing customer-oriented services has become a primary concern for these mobile network service providers, owing to customers' ever-changing needs as a result of technological, social, and environmental factors (Ogunnaike, Ibidunni, & Adetowubo-King, 2014:17).

Figure 2. 2: Percentage market share of the main mobile network operators in the Nigerian telecommunications sector



Source: Nigerian Communications Commission (2019)

2.6.1 MTN

MTN Nigeria is the largest member of the MTN group, an acknowledged mobile network leader (Adekitan, 2014:11), and a South African company with many subsidiaries around the world (21 countries in Africa and the Middle East) (Abdullahj, Oni, Ahmed, & Shakur, 2015:2). It is Africa's leading mobile telecommunications company (MarketLine, 2017:24). MTN Communications Ltd was one of the three initial GSM companies licenced by the NCC to provide telecommunications services to the Nigerian public (Iwuagwu, 2014:662; Abdullahj et al., 2015:2; Nwachukwu & Onyenankeya, 2017:172). The company's objectives and values are built on establishing a committed relationship with its customers, and providing innovative services that enhance connectivity (MTN, 2019). On May 16, 2001, MTN became the first mobile network to make a call (Adekitan, 2014:11). Thereafter the company launched full commercial operations in August 2001, beginning in Lagos, Abuja, and Port Harcourt, and went on to be the largest in Nigeria (Abdullahj et al., 2015:2). The company recently marked 18 years of operation in Nigeria (MTN, 2019).

MTN Nigeria has become the largest mobile network operator in the Nigerian telecommunications market since its launch, with over 4,000 corporate branches, 65.2 million subscribers, and 46

million active data users (MTN, 2019:6; NCC, 2019). MTN Nigeria owns the largest fibre network coverage (>25,800km) and boast a wide range of spectrum holding, strong ancillary partners, and the largest distribution network (MTN, 2019:6). The company recorded revenues of $10,057 million in the fiscal year ending December 2016, an increase of 6% over the 2015 fiscal year (MarketLine, 2017:24); it generated N887 billion (R36,067 million) in 2017, and then N1.03 trillion (R37,971 million) in 2018, an increase of 17.1% (MTN, 2018:9). MTN Nigeria's operations also accounted for 28.2% of revenue made by the MTN global group in 2018 (MTN, 2018:9). MTN Nigeria has invested over N20 billion in various corporate social programmes in Nigeria (MTN, 2019:8), and it has also created jobs for hundreds of thousands of Nigerians directly and indirectly. In the area of products and services, MTN has differentiated itself by offering various services such as MTN happy hour, MTN Family and Friends, and in 2020, it launched the first mobile money platform in Nigeria.

2.6.2 GLO

Globacom (Glo) is the Second National Operator (SNO) in Nigeria; it is licenced to provide multiple telecommunications services (Awobamise & Jarrar, 2018:3), and operates as a subsidiary of Conpetro Nigeria Ltd (MarketLine, 2017:22). In August 2002, the NCC granted Globacom the fourth Nigerian digital mobile network licence for $200m, with the motive of creating an alternative indigenous network to the government-owned NITEL and the other two existing operators, MTN and ECONET (Bakare et al., 2017:99). Glo started operations in Nigeria on August 29, 2003, and boasts a deep penetration countrywide with a subscriber base of about 46.6 million (as shown in Figure 2.2 above), making it the second-largest telecommunications network provider (Adekitan, 2014:11; NCC, 2019). Globacom's objectives and vision focus on providing affordable telecommunications solutions to customers and on its commitment to building Africa's biggest and best telecommunications network (Glo, 2019). It currently has active operations in four West African countries Nigeria, the Republic of Benin, Ghana, and Côte d'Ivoire with over 80 store outlets in Nigeria, 25 in Ghana, and four in Benin (MarketLine, 2017:22).

Globacom has always been at the forefront in offering value-added services to subscribers, such as Glo Oga SIM, Glo Security Tips, Glo Medicare, Glo Legal Adviser, Glo Jolof Recharge, and recently the Glo 4G LTE network. Glo's resolve to provide its subscribers with expanded coverage and better services was boosted by its building of an $800 million high-capacity fibre-optic cable called Glo-1 in 2011. This investment showed Glo's commitment to its Nigerian subscribers, as it plans to launch another sub marine cable called Glo-2 before the end of 2019 (Akinsanmi, 2019). It was also the first Nigerian telecommunications network to launch the popular per-second billing

system (which other Nigerian mobile network operators refused to adopt until 2007) (Awobamise & Jarrar, 2018:3). Globacom has become one of the cheapest cellular services for both broadband Internet and phone calls (Awobamise & Jarrar, 2018:3). It has kept the telecommunications industry on its toes by introducing game-changing policies and tariffs that are beneficial to subscribers and that affect the whole industry. Glo is also well-known for its aggressive marketing promotion and celebrity endorsements. Globacom is a frontline sports supporter in Nigeria and Ghana, as it has sponsored the national football teams and the Premier Leagues in both countries (Awobamise & Jarrar, 2018:3).

As a privately-owned company, Globacom does not publish its financials (MarketLine, 2017:22).

2.6.3 AIRTEL

Formerly known as Celtel Nigeria (and founded in 2000), Airtel Nigeria was formed by a group of institutional and private investors, and three state governments (Adekitan, 2014: 11). The name has evolved over the years: it was previously known as Vmobile, and originally as Econet (Adekitan, 2014:11; Okoro & Barikui, 2017:92). Bharti Airtel, Asia's leading telecommunications service provider, has acquired Airtel Africa's mobile network operations in 15 countries, including Nigeria (Adekitan, 2014:11). Airtel Nigeria ranks among the top four mobile service providers in terms of subscribers, with a customer base of more than 45.9 million (NCC, 2019; Airtel, 2019). Airtel Nigeria's focus and objective is to provide innovative services that are customer-sensitive by building a relationship that is customer-centric (Airtel, 2019). Airtel Nigeria was also recently rated the fastest-growing Internet and data operator in Nigeria, as they offer one of the cheapest data bundle subscriptions (Airtel, 2019). The company's product offerings include 2G, 3G, and 4G wireless services, and mobile commerce and enterprise services. About 70% of Nigeria's population is served by the company's mobile network, and its 3G coverage is over 41% of the country. The distribution network of the company extends across more than 40,000 retail outlets, with just over 332,042 retailers (Airtel, 2019). Airtel has also consistently intervened in corporate social investment programmes in areas of health-care, access to clean water, and several charity projects in adopted schools; just as it is bankrolling the Airtel Touching Lives programme, a revolutionary initiative designed to offer practical relief to the underprivileged, hard-to-reach and downtrodden. While Airtel has scored big with its Adopt-a-School programme and the touching lives initiative, its employee volunteering scheme has also provided an avenue for its employees to engage directly in touching the lives of many local residents (Airtel, 2019).

2.6.4 9MOBILE

9mobile, a Nigerian company founded from the collaboration of Mubadala Development Company and Etisalat of the United Arab Emirates, is the newest entrant in the mobile network provider and unified access scene in Nigeria. In January 2007, Etisalat obtained the federal government's Unified Access Licence (Adekitan, 2014:11). In July 2017, Etisalat changed its name to 9mobile, having lost its biggest shareholder (Mubadala Development Company) owing to controversy. Analysts think the exit of Mubadala was a result of the mishandling of $1.2 billion in loans by 9Mobile (Premium Times, 2017). Although 9Mobile's proposed sale to Teleology Holdings has been mired in scandal, it continues to provide prepaid and postpaid network and data services such as More-Wallet, Micro-Insurance, and Moretunez, to over 15.6 million subscribers (Udo, 2018; Onwuaso, 2018, NCC, 2019; 9mobile, 2019). 9mobile's market stronghold comes from its digital structure, as it provides some of the most innovative services (such as kwik-money, moresavers, 9pos, and DCB, SuperTV, IPTV, and Cloud 9) from which millions of Nigerians have benefitted.

9mobile has operated several corporate social responsibility initiatives over the years. It has recently boosted the push to raise Nigeria's awareness of HIV/AIDS and to encourage its prevention and control (9mobile, 2019). In an attempt to improve commitment to this intervention, it recently collaborated with the Joint United Nations HIV/AIDS Program (UNAIDS) to contribute to efforts to eradicate mother-to-child HIV transmission (9mobile, 2019). The merit award scheme was another initiative of 9mobile in 2009, providing Nigerian students from all social classes with an educational fund with more than 1,200 undergraduate students in electrical electronics engineering, computer science, and business management were granted these prestigious scholarships by Emerging Markets Telecommunication Services Limited (trading as 9mobile).

2.7 CURRENT TRENDS IN THE NIGERIAN MOBILE TELECOMMUNICATIONS INDUSTRY

The global mobile telecommunications industry has seen a lot of changes, including the incorporation and introduction of global positioning systems (GPS), mobile Internet facilities, mobile money and mobile payment facilities, and mobile number portability (MNP) (Nimako, Ntim & Mensah, 2014:117). The apex regulator of Nigerian telecommunications, the NCC, has been a strong influence in ensuring that telecommunications operators follow the rules of best practice and implement customer-oriented innovations (Alabar, Egena & Gbande, 2014:112).

- **Mobile number portability (MNP):** One of the NCC milestones was the implementation in April 2013 of the Mobile Number Portability (MNP) policy (Olajide, Afolabi, Monsurat, Oladele & Olusegun, 2018:12081), which enables mobile phone network subscribers to retain their telephone number when they migrate from one mobile network provider to another (Nimako et al., 2014:117; Adika, 2015:57; Olajide et al., 2018:12081). The introduction of Mobile Number Portability in Nigeria was a relief to subscribers of telecommunications who had complained about the low quality of service providers' services (Oketola & Opara, 2013; Alabar et al., 2014:112). It was assumed that the MNP would intensify the competition further, and make it easier and more cost-effective to implement new and improved telecommunications services (Alabar et al., 2014:112). It was also argued that MNP would provide customers with the opportunity to select their network at any time while keeping their numbers, contributing to healthy market competition, increasing customer empowerment, and improving service quality and customer service delivery (Alabar et al., 2014:113; Nimako et al., 2014:117). A report by the NCC (2019) pegged the number of customers successfully porting their network service provider since the system was introduced in Nigeria at 961,866. This suggested an aggressive customer switching practice in Nigeria's mobile telecommunications industry. Consumer acceptance of MNP would also have major consequences for marketing theory and practice in areas of consumer behaviour, such as switching behaviour (Nimako et al., 2014:117).

- **5G:** The Mobile Economy (2019:13) reported that 2019 would see 5G launches accelerate, and devices hit the market in sub-Saharan Africa. MTN Nigeria is one of the first mobile network providers to have tested the new 5G technology in 2019 (Nzekwe, 2019), but the NCC has not approved its use.

- **MOBILE MONEY:** In conjunction with the banks, mobile network providers are able to provide a solution that allows a user transfer money using a personal identification number and secured text message. At the end of the text message is the recipient who can reach out to the corresponding bank to get the transferred money (Deloitte, 2021). MTN Nigeria became the first mobile network provider to acquire a mobile banking licence in Nigeria in its bid to redefine the sector with innovative and customer-oriented strategies (MTN, 2019). 9mobile has also launched its own mobile money platform, known as Kwik-Money, which has received great acceptance from its subscribers (9mobile, 2019).

2.8 CHALLENGES FACED BY TELECOMMUNICATION PROVIDERS

The development of the GSM network in Nigeria, and in other parts of the world faced (and still faces) many challenges (Bakare et al., 2017:101). This has led to most mobile telecommunications firms losing customers at an alarming rate in the Nigerian telecommunications sector, as customers switch to other service providers and own multiple SIM cards (Izogo, 2016:746). Regardless of how revolutionary the industry has been, issues such as the poor state of the service provider connectivity infrastructure base, inefficient power supply, poor tariff regulations, inability to meet consumer expectations (Oghojafor et al., 2014:68; Yusuf, 2017:3; Nkordeh et al., 2017:3), and outdated communication technology add layers of operational costs and service tariffs that are passed on to the consumer (Mawoli, 2009:114; Izogo, 2016:749). These challenges have led to controversy and criticism over time for unfair and unjustifiable billings or tariffs, acute network congestion, a poor signal, deceptive promotions, inadequate customer service, and generally poor service (Omenugha, 2015:553; Munyanti & Masrom, 2018:10). These inefficiencies and controversies in turn have led to mobile network operators in Nigeria facing the challenges of demonstrating customer-centric and continuous service improvement.

- **Inadequate power supply:** In Nigeria, the issue of power instability has been persistent and has hindered the technological development and growth of the Nigerian mobile telecommunications sector (Isaiah, Mustapha & Richard, 2019:7). Operators have resorted to powering their Base Transmission Stations (BTS) with generators in order to sustain a regular network (Tebepah, 2015:20). The four leading operators (MTN, Glo, Airtel, and 9mobile) jointly power over 22,000 base transceiver stations with about 44,000 generators, costing about N24 billion annually (Afolabi & Ojo, 2015:60; Nkordeh et al., 2017:3). This is considered outrageous, and makes the operations and services very expensive. The operating cost of running these generators is transferred to customers through high tariffs and billings (Afolabi & Ojo, 2015:60).

- **Transmission infrastructure challenges:** Many developing countries such as Nigeria have poor communications infrastructure, which has prevented connectivity expansion in those countries (Omiunu, 2017:46). The high cost of infrastructure and its network deployment has for decades been one of the bedevilling factors holding back the growth of mobile telecommunications in Nigeria (Adediran, Opadiji, Faruk & Olayiwola, 2016:22). The absence of adequate transmission infrastructure in Nigeria has affected not only

mobile network providers, but also customers who are at the receiving end. This has caused a setback in both network quality and overall service quality, leaving customers continually seeking out a mobile operator that can meet this need, as it has encouraged the possession of multiple SIMs (Izogo, 2016:746).

- **Inability to meet consumer expectations:** The inability of mobile network providers to meet the needs and expectations of subscribers is a challenge that has lasted for years and does not seem to be going away anytime soon, as customers have remained dissatisfied (Oyatoye et al., 2015b:10; Oluwafemi & Adebiyi, 2018:102; Ramadania et al., 2018:1919). This can be linked to the reluctance of mobile network operators to be more innovative and customer-oriented, as this would improve customer service, price, network quality, overall service quality, and the provision of diversified products (Egena, 2013:2; Tebepah, 2015:24).

- **GSM tariff rates:** National calls were accompanied by pulses prior to the adjustment in tariff rates, and the tariffs were dependent on the radial distance between the called party and the caller (Nkordeh et al., 2017:4). The greater the distance, the quicker the pulse burnt out, with lower charges for the shorter distances (Nkordeh et al., 2017:4). Some of the licenced operators reported their fears about sustaining the current low-price regime. Some of the demands of customers, including a cheaper call rate, are also obstacles for the industry (Bakare et al., 2017:101).

- **Import obligations and long authorisation processes:** About 95% of the resources and equipment used by operators in Nigeria are imported, and these imports are subject to lengthy, cumbersome authorisation and clearance procedures that hinder the deployment of the network facilities (Micah & Alabi, 2016:45; Nkordeh et al., 2017:4). Other challenges include the problem of exorbitant import duties, high foreign exchange rates, and high interest rates charged by government (Micah & Alabi, 2016:45). The cost of all of these is placed on the customer, leaving the subscriber at the mercy of the network provider as they roll out unfair prices (Mawoli, 2009:114; Izogo, 2016:749 Afolabi & Ojo, 2015:60).

- **Over-taxation:** Nigerian GSM operators have always been at loggerheads with the government, and are currently struggling with the high demand of various levies, taxes, and duties imposed on them by different levels of government, including local, state, and federal governments, ministries, departments, and agencies, which generally leads to regressive and double taxation (Micah & Alabi, 2016:45; Kadiri & Lawal, 2019:7). Not only this, but mobile network operators are also confronted by multiple taxation on their equipment by several tiers of the Federal Government (Micah & Alabi, 2016:45). At times, once facilities are in place, the host communities will begin to inundate the network provider with letters demanding such infrastructure as road, electricity, schools, hospitals, etc (Bakare et al., 2017:101).

- **Insecurity, destruction and vandalism of equipment:** Other major challenges facing licenced operators in the GSM market in Nigeria range from the theft of equipment to vandalised facilities, abduction of workers and demands for ransom, frequent invasion and blockading of facilities and telecommunications infrastructure - such as Automatic Voltage Regulators (AVR) and power plants by hooligans (Obodoeze et al., 2013:6; Adediran et al., 2016:21). Replacing these stolen or destroyed installations is a serious deterrent of the operations of GSM network providers. The insecurity and vandalism, in a number of cases, has forced the shut-down of operations, and has also caused the outright closure of many telecommunications facilities in a bid to protect personnel and business properties, leaving customers out of adequate network reach (Adediran et al., 2016:21).

2.9 FUTURE OUTLOOK OF THE NIGERIAN TELECOMMUNICATIONS SECTOR

The future of Nigeria's mobile telecommunications industry is closely connected to meeting customer expectations (Bakare et al., 2017:101). Nearly every telecommunications subscriber in Nigeria today has migrated to other mobile network providers owing to the high mobility opportunities. Communication services are in constant demand, and the mobile telecommunications industry is growing at an unprecedented rate (Izogo, 2016:746). The following are the expectations of users, including potential subscribers.

- **Lower tariffs:** With the subscriber population increasing, service prices were meant to be dropping proportionately. But this was not so in Nigeria, considering that although most of

the mobile network operators recoup their expenses, tariffs remain very high (Afolabi & Ojo, 2015:60). While Nigeria's telecommunications tariff has fallen by more than 75% since 2001, Nigerians are calling for more tariff cuts for SMS and voice communication (Kadiri & Lawal, 2019:2). The industry's future depends on how well they can meet these demands.

- **Seamless connectivity:** It is common for Nigerians to own cell phones with multiple SIMs, or to have two or more mobile phones at the same time (Izogo, 2016:746). This is because there is still very poor inter-connectivity between the various mobile networks (Isaiah et al., 2019:8). These are areas of challenge that have lingered in the industry for years, and they must be addressed as swiftly as possible for the sake of the future of the industry. The pressing issue of infrastructure requires support and investment from a variety of sources, including government, the private sector, multilateral institutions (such as the United Nations), and financial institutions (such as World Bank) (Omiunu, 2017:46). This will help to lower tariffs, as the mobile telecommunications industry will be able to conserve some of its resources.

- **Research and development:** The mobile telecommunications industry in Nigeria has done little or nothing in the field of research and development; yet it is expected that the mobile industry make research and development a top priority (Tebepah, 2015:24). Research in the new fields of wireless communication networks, such as Intelligent Networks (IN), satellite telephony technology, hybrid energy systems, and sustainable renewable energy should be actively sponsored and promoted by the industry. This can be achieved by collaborating with universities and research institutions to engage in progressive and mutually beneficial research, since electricity, power supply, and other important infrastructure is essential to the industry's survival in Nigeria (Tebepah, 2015:24).

- **Training and Technology Transfer:** The future prospects of the industry hinge on the training and development of employees (engineers, technicians, managers, administrators, etc.) at mobile network companies (Bakare et al., 2017:101). The industry is expected to invest significantly in employee development and training programmes, that will improve work skills that support the entire creative and innovative process of the organisations (Tamunosiki-Amadi & Ogoun, 2018:218).

- **Government policy:** For the sustainability of the industry, it will be imperative for government to continue to maintain stability in the policy and regulatory space (Ndukwe, 2011:19). The high investment levels that have been attained in the sector can largely be credited to a stable policy and regulatory regime enjoyed by the industry since 2000, and not only because Nigeria has a large population. According to Dr Ernest Ndukwe (the former Vice Chairman/Chief Executive of NCC), innovation and policy reforms are important requirements for development, and poor governance and bureaucratic exhaustion are major causes of underdevelopment in sectors such as mobile telecommunications (Afolabi & Ojo, 2015:60). The government must therefore maintain or improve its policies to encourage a continuous inflow of foreign direct investment (Osabutey & Okoro, 2015:420).

- **Independence of the regulatory institution:** The political and financial independence of the regulatory institution, the NCC, should be maintained. In order to establish a competitive market between network operators so that customers can benefit, an independent institution or authority should be able to regulate the market fairly and earn the confidence of consumers, investors, and other stakeholders (Batuo, 2015:314). The telecommunications sector is very capital-intensive, and so the focus must be on maintaining an attractive and conducive operating environment in order to continue promoting timely network expansion, enhancing service quality, and ensuring national coverage in Nigeria (Ndukwe, 2011:19).

2.10 CONCLUSION

The Nigerian telecommunications sector has followed in the footstep of the global telecommunications industry, which has experienced tremendous growth and development in the past two decades. This industry has revived itself from colonial subjugation to being one of the fastest-growing and largest, globally. However, in the journey of its growth, the Nigerian mobile telecommunications industry has experienced a lot of setbacks, and is still faced with many challenges, which have prompted government intervention and deregulation of policies. The deregulation of the Nigerian telecommunications sector and the establishment of the Nigerian Communications Commission created a lot of economic and infrastructural benefits and transformed the sector from a monopolistic industry to the competitive one it is today. Nonetheless, Nigeria's communication environment has been watchfully regulated by

government agencies to prevent manipulation of the market and exploitation of subscribers by mobile network providers. The main mobile operators in Nigeria - MTN, Glo, Airtel, and 9mobile - provide various services to attract and retain their market share. For the mobile network providers to be able to enjoy this now and in the future, the expectations of customers must continually be met and committed customer-centric relationships built.

The next chapter discusses the literature review aspect of the theoretical grounding and underpinning, which includes the social exchange theory, the relationship marketing theory, the customer relationship management theory, the service quality theory, the commitment and trust theory, and the expectation disconfirmation theory.

CHAPTER 3

THEORETICAL GROUNDING

3.1 INTRODUCTION

The literature review for this study has been divided into two chapters (Chapters 3 and 4), with Chapter 3 focusing on the paradigmatic shift in marketing development and the theoretical underpinning, while Chapter 4 discusses the literature relevant to the specific constructs that will be measured in the study.

Understanding marketing definition, process, and theories is the foundation to starting a comprehensive marketing study. This chapter therefore starts by highlighting and explaining the paradigmatic shift in marketing, and how it has transitioned to establishing relationships with customers during the exchange process. The theories underpinning this study are then broadly explained in relationship to the study.

3.2 PARADIGMATIC SHIFT IN MARKETING DEVELOPMENT

Over the last ten years, the paradigmatic shift in marketing, which is an essential component of business, has undergone various growths and developments, and so the marketing concept has different views that make it subject to change, defying a single definition (Adika, 2015:12). Earlier in the literature, a global association of academics and professionals, the American Marketing Association (AMA), earlier in literature defined marketing as “the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, services to create exchanges that satisfy individual and organisational objectives” (AMA, 1985; Grönroos, 1989:54). This interpretation of marketing outlines what became widely known as the traditional (transactional) marketing concept. In the 1950s and 1960s, the era of mass-marketing that focused on consumer goods and industrial markets, this definition was embraced (Šonková & Grabowska, 2015:197).

However, as the 20th century drew to a close, marketers and economists began to move towards the relational-based concept of marketing. This led to the modification of marketing definitions, and of marketing as a business function. For example, as defined by the AMA (2017), marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and

exchanging offerings that have value for customers, clients, partners, and society at large. The process of creating, offering, and exchanging products of value is included in the definition provided by Kotler (1997:9), who also defined marketing as a social and management process by which individuals and groups obtain what they need and want through creating, offering and exchanging products of value with others. Some authors (Zeithaml, 1988:13; Kumar & Reinartz, 2016:36) have described this value as the overall assessment of the utility of an offering according to perceptions of what is received and what is given. For Kotler, Roberto and Lee (2008:5), "Marketing is the management philosophy that, achieving organisational goals, depends on knowing the needs and wants of target markets and delivering the desired satisfactions better than competitors do".

Despite the different views of the marketing concept, the definition by Kotler and Armstrong (2008:5), which explains marketing as "the process by which companies create value for the clients and develop a strong relationship with the consumers to obtain a certain value from them", is adopted for the purpose of this study. This definition relates to the relationship marketing paradigm explored in this study, in that it explains marketing as essentially delivering value to customers (satisfaction), and as establishing long-term and mutually profitable relationships with the customers.

In order to understand clearly the development of marketing and the emergence of customer relationship management, it is essential to consider the transactional (traditional) marketing approach, and how marketing strategies and theories have evolved to become customer-centric.

3.2.1 The transactional (traditional) marketing concept

In the final century of the second millennium, transactional (traditional) marketing was the foremost trend (Šonková & Grabowska, 2015:197). In broad terms, transactional marketing is defined by a focus on a single short-term sales orientation (Berndt & Tait, 2014:5), with product orientation and its features substituting for a customer orientation (Palmer, 1994:571), with little or no regard for customer service (Gummesson, 1994:7) and limited customer commitment (Khani, Noubar & Aali, 2014:400). Transactional marketing also maintained moderate customer contact and immediate profitability or a sales volume boost to achieve an organisation's short-term target, without considering the irreparable harm that can be done to long-term customer relationships (Tadajewski, 2015:489; Yerpude & Singhal, 2018:444).

The traditional marketing approach also upheld the marketing mix principles of the 4Ps (product, price, promotion, and place) and the pursuit of market share dominance using a mass-marketing

approach, while prioritising the acquisition of new customers (Chakiso, 2015:58; Šonková & Grabowska, 2015:197). Customer loyalty (targeting current customers rather than seeking new ones) in that era was also not of major concern to business organisations (Rahim & Omoera, 2018:44). Munyoro and Nyereyemhuka (2019:219) argue that, before the 21st century, consumers lacked sufficient knowledge about selection and choice preferences and that is why monopolistic industries managed to exploit customers during that era. In addition, business organisations' commitment to consumers in that era was not satisfactory (Šonková & Grabowska, 2015:197). As a result, there was minimal or no attention to customers value, wants, needs, and satisfaction when promoting and selling products in the transactional marketing era (Šonková & Grabowska, 2015:197; Kotler & Armstrong, 2016:267).

During the emerging phases and the growth of the modern marketing and service industry, research started indicating that the marketing mix model had become too confining for service marketing (Grönroos, 2006:395; Adika, 2015:14). Grönroos (2006:412) also acknowledged the diminishing position of the marketing mix paradigm for the first time since its inception among practitioners and researchers in the 1970's.

In the opinion of Khani et al. (2014:400) and Wende (2019:1), the long-term success of an organisation does not depend solely on the exploitation or manipulation of marketing mix variables, but rests on building a long-term relationship between consumer and seller. Parvatiyar and Sheth (2000:5) established that the disposition of traditional marketing neglected the component of relationship marketing in the marketing process, and its strategic impact on human interdependence in an exchange process.

Owing to the changes in the marketing environment, an increasing number of organisations began to realise that their approach to transactional marketing would not be sufficient to compete in the emerging marketplace (Khani et al., 2014:400). For example, it was no longer sufficient for organisations simply to produce and market mass consumer goods, and to sell to any potential customer in the market, with little or no consideration of customers' expectations and values. This was because marketing had gone beyond producing, trading, and distributing products, to being progressively associated with the creation and nurturing of mutually satisfying long-term relationships with customers (Khani et al., 2014:400). This gave rise to the emergence and adoption of relationships with customers in an exchange process.

The theoretical grounding and underpinning of the study therefore explains the marketing process and behaviour of customers and organisations in an exchange process.

3.3 THEORETICAL GROUNDING AND UNDERPINNING

A theoretical framework is essential for giving structure to the theories used, as it explains the theoretical relationship of all the factors. A theory is a systematically related set of statements, including some law-like generalisations, that is empirically testable (Eisend & Kuss, 2019:24). Theories in marketing research have the function of facilitating the understanding of reality (Eisend & Kuss, 2019:29). This study is therefore grounded mainly in social exchange theory, and customer relationship management theory which is embedded in relationship marketing theory (Payne & Frow, 2006:137; Toyese, 2014:46). It is proceeded by trust-commitment theory, service quality theory, and expectation disconfirmation theory.

3.3.1 Social exchange theory

Social exchange theory is an extensive theoretical paradigm that stretches across several social scientific disciplines - such as sociology, management, economics, and social psychology research - as well as in marketing, and is considered to be one of the oldest theories about social behaviour (Homans, 1958:598; Cropanzano, Anthony, Daniels & Hall, 2017:1; Kimuli, Kasimu & Sabi, 2018:569). Emerson (1976:336) and Cropanzano and Mitchell (2005:874) explain that, regardless of its name, it is not a single theory, but is better comprehended as a household of conceptual models. The social exchange theory developed by Homans (1958:602) considers individuals' social behaviour relating to economic exchange activities, and has a focus on consumer behaviour.

Social exchange theory was defined by Blau (1964:91) as the repeated voluntary actions of individuals who are motivated by the returns they are expected to bring and do, in fact, typically bring. It also outlines the exchange of goods and services between two autonomous parties (the organisation and the customer) who are acting for personal gain and engaging in reciprocity for the sake of beneficial impact (Lee, Capella, Taylor, Luo & Gabler, 2014:2141; Itani, Krush, Agnihotri & Trainor, 2020:265). Reciprocity or repayment in kind is possibly the most significant exchange rule (Cropanzano & Mitchell, 2005:875). Reciprocal interdependence brings to light conditional mutual transactions, in which a deed by one party leads to a response by another (Cropanzano & Mitchell, 2005:876; Huang & Xiong, 2010:487).

Although there are many interpretations of social exchange theory, most current models in consumer behaviour share a few common features: an organisation's (such as a mobile telecommunications network provider's) initial treatment of a target individual (a subscriber), the individual's reciprocal responses (both attitudinal and behavioural) to the action, and relationship

formation (Cropanzano et al., 2017:2; Itani et al., 2020:265). If an organisation or business supplies a benefit or initiates a positive action that leads to customer satisfaction, the customer is expected to respond in kind by engaging in more positive reciprocating responses such as trust, commitment, and loyalty, or fewer negative reciprocating responses such as switching (Cropanzano & Mitchell, 2005:876; Cropanzano et al., 2017:2).

Previous studies (such as those of Paillé, Grima & Dufour, 2015:521; Wu, Chen & Chen, 2015:2324; Shi & Liao, 2017:606; Akram, Kamran, Iqbal, Habibah & Atif Ishaq, 2018:3; Rather, 2019:118) have also emphasised the importance of social exchange theory in explaining the relationship between trust, commitment and loyalty. Among them, Wu et al. (2015:2328) and Rather (2019:131) suggest that future research studies examine these factors in different contexts.

However, the constant comparison of social and economic benefits (cost-benefit analysis) after a series of patronages by a customer and available alternatives determines the degree of the customer's commitment to the current relationship (Mayaka & Oloko, 2018:310). The underlying assumption here is that customers evaluate the benefits against the costs, each appraised reasonably to a comparison level (what might be expected given the customer's position in a relationship) and a comparison level for alternatives (what the customer could get in an alternative relationship), so as to opt for the most rewarding social relationships to enter (Landor & Barr, 2018:332). Homans (1958:598) proposed that when a customer senses that the cost of a relational exchange outweighs the observed benefits, then the customer will choose to leave the relationship.

Indeed, as Hoppner, Griffith and White (2015:65-66) discussed, reciprocity operates to gratify, strengthen, and consolidate a customer's commitment to and trust in the exchange relationship, and sets in motion the basis for high-quality relationships (Cropanzano & Mitchell, 2005:875; Li, Li & Feng, 2015:1045; Abubakar & Mokhtar, 2015:466; Cropanzano et al., 2017:2).

Nevertheless, it is noteworthy that not every social exchange will necessarily bring about a trusting and committed relationship (refer to section 3.3.4 and Chapter 4, sections 4.5 and 4.6) relationship (Clark, Fine & Scheuer, 2017:45). For this type of commitment to be sought in an exchange relationship, the customer must have to see its importance or value first. This means that the exchanged resources must offer some form of obvious benefit to the customer to merit reciprocation (Clark et al., 2017:45; Landor & Barr, 2018:332). Thibaut and Kelly (1959:21) explain that whether an individual retains a relationship with a business organisation, or firm depends on

the comparison with the current relationship, their past experience (i.e., if it was satisfactory or unsatisfactory), and potential alternatives. However, the realisation that customers' actions will foster favourable responses is expected to prompt business organisations to operate better and to manage their customer relationships (Li et al., 2015:1045).

Social exchange theory further postulates that the exchange of goods and services takes place not only for tangible gains but also for intangible benefits, such as building relationships and ensuring customer satisfaction and loyalty (Blau, 1964:98); it is applied in the literature explaining the benefits in a relational exchange (Cropanzano & Mitchell, 2005:875; Yoganathan, Jebarajakirthy & Thaichon, 2015:16), which is the main focus of achieving the primary goal of the current study. Similar to the current study, prior studies by Oghojafo et al. (2014:71), Youcef et al. (2015:1), and Adika (2015:44) also confirmed that factors such as customer satisfaction, trust, commitment, and loyalty in the relational exchange increase long-term relationships.

Rather than dwelling on the tangible and financial gains, firms must endeavour to adopt customer-oriented strategies that will satisfy both the customer and organisation in the long run (Bojei & Abu, 2014:170). For example, if mobile network providers consistently provide high levels of quality service, subscribers will be encouraged to establish relationships that will yield discretionary behaviours of customers (favorable word-of-mouth, cooperation in the service encounter, and reporting feedback), increased profit and market share during the exchange process (Cropanzano & Mitchell, 2005:884; Dai, Liu, Zhuang & Wang, 2018:2). When the proper balance is maintained, there is the potential for long-term satisfactory relationships (Berry & Parasuraman, 1991:41) and the emergence of customer relationships as a basis for firm competition (Lee et al., 2014:2142).

Smith and Hamon (2012:249) summarised the core assumptions of social exchange theory as follows: consumers are motivated by self-interest, individuals are constrained by their choices, humans are rational beings, and social relationships are characterised by interdependence and reciprocity (Landor & Barr, 2018:332). Social exchange theory is thus relevant to this study, as it is embedded in the development of long-term relationships with customers, and covers service quality, customer satisfaction, trust, commitment, switching intention, and customer loyalty.

Social exchange theory has also been highlighted by Zietsman, Mostert and Svensson (2019:3) as a central contributor to developing relationship marketing, by moving organisations beyond transactional exchanges to relational exchanges, where interactions and interpersonal

relationships between stakeholders and organisations are the underlying factors. It is for these reasons that social exchange theory was considered an important theory to explain the relationships in the proposed conceptual model of this research study.

3.3.2 Emergence of Relationship Marketing

Relationship marketing (RM) is noted as a paradigm shift in marketing that moved the focus from product-centric marketing to relationship marketing (Toyese, 2014:46), with the intention of improving long-term profitability by moving away from the transactional (traditional) perspective towards developing strong relationships with customers, suppliers, media, government, distributors, and other stakeholders (Opara & Opara, 2016:14). The success of RM is measured by the customer's perception of long-term satisfaction (Knox & Gruar, 2007:115; Makhitha, 2017:649).

Relationship marketing, which emerged in the field of service marketing and industrial marketing, was developed in the 1980s (Berry, 1983:61) and appeared in the literature in the early 1990s (Grönroos, 1990:5; Morgan & Hunt, 1994). Morgan and Hunt (1994:21) gave a widely accepted definition of RM as all marketing activities directed towards establishing, developing, and maintaining successful relational exchanges. Grönroos (1990:5) states that relationship marketing is meant to establish, maintain, and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met by a mutual exchange, and fulfillment of promises.

Berry (1983:25), from a different more perspective, also views relationship marketing from a strategic viewpoint. He emphasises that winning over new customers should be seen as only a transitional step in the marketing process. Establishing a strong relationship with these customers and converting them into loyal ones is equally a major facet of marketing. Thus, Berry outlined relationship marketing as "attracting, maintaining, and – in multi-service organisations – enhancing customer relationships" (Berry, 1983:25). This definition is adopted in this study because it is centred solely on establishing a relationship with the customer, which is the focus of this study

3.3.2.1 Relationship marketing theory

Grönroos (2017:218) points out that, since the start of the current millennium, relationship marketing has played a pivotal role in the management of seamless long-term relationships with mutual benefits for customers and all the parties involved. This notion is supported by Knox and

Gruar (2007:115), who posit that relationship marketing provides a progressive scheme for the management of stakeholders, as it underlies customer cooperation in the formation and development of the relationship-building process beyond the instantaneousness of market transactions (Roberts-Lombard & Petzer, 2018:430).

The concept of relationship marketing has been widely employed by enterprises to position their capabilities and resources in order to ensure that the expectations of all stakeholders are fully met, thus improving the chance of long-lasting relationships, which directly affect increased profitability and market share (Knox & Gruar, 2007:115; Grönroos, 2017:221; Chao, Chen, & Yeh 2015:22).

Relationship marketing has evolved spectacularly in the last 25 years, both as a practice and as a discipline, and has become a major school of thought in marketing (Sheth, 2017:4). However, it has also become synonymous with other concepts and terms - such as direct marketing, customer relationship management, micromarketing, one-to-one marketing, loyalty marketing, interactive marketing, and database marketing - because it focuses on relationships with all the stakeholders (Sheth 2017:4).

This diversity indicates that relationship marketing has good potential for a fruitful scientific discourse; but it is not customer-centric (Gummesson, 2017:16). Morgan and Hunt (1994:21) also argued that most existing definitions of relationship marketing have noticeably excluded the customer as one of the exchange stakeholders (Roberts-Lombard, 2012:3804).

Therefore, with relationship marketing focusing on building relationships with all stakeholders, including customers - CRM has focused on only one of these stakeholders: the customer.

3.3.3 Birth of Customer Relationship Management

Customer relationship management (CRM) improves on the ideology of relationship marketing and aims to establish, develop, and reinforce relationships with carefully targeted customers to maximise customer value and corporate profitability (Payne & Frow, 2006:137; Toyese, 2014:46; Al-Weshah, Al-Manasrah & Al-Qatawneh, 2019:800). CRM thus involves customising and individualising customer relationships, beginning with the proposition that each one is different, which is increasingly obvious in today's world (Ismană-Ilisan, 2018:81).

The Customer relationship management ideology came to light in the marketing sector, among information technology (IT) vendors, and in the practitioner community in the mid-1980s to 1990s (Payne & Frow, 2005:167; Debnath, Datta, & Mukhopadhyay, 2016:299; Bashir, 2017:293). Empirically, CRM has been shown to have emerged as a fusion of relationship marketing (seen as one of the central and formative disciplines of modern marketing) (Payne & Frow, 2006:137), direct marketing (Neslin, 2014:289), and contract management (Shaon & Rahman, 2015:23), which originated in the 1980s, and concerns storing and safeguarding customer details for further contact with them.

However, customer relationship management is frequently used in the area of technology solutions, and has been portrayed as "Information-enabled relationship marketing" (Ryals & Payne, 2001:3). The technological aspect of CRM, which has commonly served as the primary distinction between CRM and RM, functions only as a facilitator, thus making the dissimilarity between CRM and RM unclear and vague - mostly when 'customer' is used in the literal sense as the ultimate recipient of the firm's output (Toyese, 2014:46).

Equally notable is the fact that relationship marketing - in the literal sense of its potent present-day practice - cannot dispense with technology or technology solutions (Toyese, 2014:46). Zablah, Beuenger and Johnston (2003:116) imply that CRM is a philosophically-related offspring of relationship marketing that the literature has neglected overtime. Based on these findings, identifying CRM solely as an Information Technology System would be inadequate, as this alone is not sufficient to nurture or comprehend the relationship between the customer and the business organisation. Rather, it can be said that CRM links Information and Communication Technologies (ICTs) to the strategies of relationship marketing by delivering of maximum value to individual customers (Demo, Watanabe, Chauvet & Rozzett, 2017:44).

Sin, Tse and Yim (2005:1265) also detected and pointed out differences between relationship marketing and customer relationship management. They said that RM is strategic, emotional, and behavioural, and emphasises maintaining relationships with stakeholders, while CRM is tactical and managerial, and emphasises maintaining relationships only with key customers. CRM therefore encompasses a process of managing detailed information about individual customers, and carefully managing all customer touch points to maximise customer loyalty (Kotler, 2012:74; Roberts-Lombard, 2012:3804).

This study thus considers customer relationship management in its holistic view of handling customer experiences, as opposed to the narrow perspective of the implementation of

technological solutions, which has turned out to be disadvantageous to many CRM programmes. In many productive organisations around the world, CRM has been embraced, implemented, and used without taking into account any geographical boundaries (Adikaram & Khatibi, 2016:70).

The aim is to refine a customers' encounter when they communicate with the organisation, which is hoped to result in greater satisfaction, enhanced customer loyalty, and long-term profitability (Toyese, 2014:46). Parvatiyar and Sheth (2001:5) and Toyese (2014:46) have recently attributed CRM's dominance to major factors such as rapid technological progress, more informed customers, service sector expansion, the emergence of hyper-competition, and the empowerment of teams and individuals in the process of organisational development.

For a better understanding of CRM, it is necessary to reflect on its definitions.

3.3.3.1 Definitions of customer relationship management

The conceptual clarification of customer relationship management can be viewed from many points of view (Ismană-Ilisan, 2018:81). It is not an easy task to define CRM, as various authors have defined customer relationship management from different academic or practical perspectives. The CRM definition can be drafted in several ways (concepts of strategy, process, and system), and these will differ in meaning depending on the approach or context where they are being used (Reicher & Szeghegyi, 2015:186). For example, organisations that have an e-commerce focus will incorporate more of the technology aspect of the definition, while organisations that operate in a face-to-face context will focus on the personal interaction aspect of CRM. Academics have not yet agreed on a single definition of CRM, which proves that this area is still in a phase of exploration and development (Ismană-Ilisan, 2018:81).

Payne and Frow (2006:138) believe that the holistic capacity of CRM can only be fully achieved by exploiting it from the strategic perspective. It is therefore noteworthy that the definitions in the current study have been carefully selected in close consideration of their relevance to the topic under discussion. The most representative definitions are thus presented in Table 3.1, which shows the various definitions of CRM that have been adopted.

Table 3. 1: Definitions of customer relationship management adopted for this study

AUTHOR	DEFINITION
Sheth & Parvatiyar (1995:402)	Customer relationship management is a comprehensive strategy and process of acquiring, retaining and partnering with selective customers to create superior value for both the company and customers. It involves the integration of marketing, sales, customer service and the supply chain functions of the organisation to achieve greater efficiencies and effectiveness in delivering customer value.
Swift (2001:12)	CRM is an enterprise approach to understanding and influencing customer behaviour through meaningful communications in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability.
Kincaid (2003:41)	CRM is the strategic use of information, processes, technology, and people to manage the customer's relationship with your company (Marketing, Sales, Services, and Support) across the whole customer life cycle.

AUTHOR	DEFINITION
Buttle, (2004:34)	CRM is the core business strategy that integrates internal processes and functions, and external networks, to create and deliver value to targeted customers at a profit. It heavily relies on high-quality customer data and enabled by IT
Ramani & Kumar, (2008:27)	CRM involves all the processes needed to achieve, build and maintain an ongoing relationship with customers through differential and tailored treatment of individual customers based on their likely responses to alternative marketing programs, so the contribution of each customer to the overall profitability of the firm is maximized
Rababah, Mohd, & Ibrahim (2010:223)	CRM is the building of a customer-oriented culture by which a strategy is created for acquiring, enhancing the profitability of, and retaining customers, that is enabled by an IT application; for achieving mutual benefits for both organisations and customers.
Gummesson (2011:3)	CRM is the values and strategies of relationship marketing, with particular emphasis on customer relationships, turned into a practical application
Kotler (2012:74)	CRM is the process of managing detailed information about individual customers and carefully managing all the customers 'touch point' with the aim of customer loyalty.

AUTHOR	DEFINITION
Amoako, Arthur, Christiana & Katah, (2012:18)	CRM is a concept of identifying customer needs; understanding and influencing customer behaviour through ongoing communications strategies and an effort to acquire, retain and satisfy the customer.
Tauni et al., (2014:54)	CRM is also known as a managerial approach which works on a customer driven strategy in which different information systems provide all the necessary information which ultimately leads to superior customer satisfaction and loyalty.
Shaon & Rahman (2015:24)	CRM is the practices, strategies, and techniques used by business organisations to collect, manage, develop, analyse and reserve information about customers through continuous surveys about products offered to customers in order to advance communication processes with customers, keep key elements of CRM, identify the factors related to CRM effectiveness, and increase the company's sales potential.

AUTHOR	DEFINITION
Rafiki, Hidayat & Al Abdul Razzaq (2019:187)	CRM can be reckoned as a business philosophy that allows organisations to comprehend customers' needs and requirements clearly through their histories and preferences which can be used as the key in helping organisations to plan for the long run.
Wibowo, Rahadhini, & Julina, (2019:72).	Customer relationship management (CRM) is the holistic process of identifying, attracting, differentiating and retaining customers, which is carried out by integrating the company's supply chain into the value creation process in order to create customer value.

Among the definitions presented in Table 3.1, the current study resonates most with the definition of Ramani and Kumar (2008:27), who define customer relationship management as "all the processes needed to achieve, build and maintain an ongoing relationship with customers through differential and tailored treatment of individual customers based on their likely responses to alternative marketing programs, so the contribution of each customer to the overall profitability of the firm is maximized". This definition relates to the perspective of CRM explored in this study, which explains it as a customer-centric process that focuses on providing personalised solutions in delivering value to customers (satisfaction) by establishing, building, and maintaining a mutually profitable long-term relationship between the customer and the organisation. Having come to a definition of CRM, an of explanation of CRM theory is presented below to enable a full grasp of the benefits and impact of its implementation.

3.3.3.2 Customer relationship management theory

Customer relationship management theory is centred on the proposition that CRM is a customer-oriented managerial strategy that aspires to establish stronger long-term relationships

with profitable customers by using comprehensive customer data to maximise loyalty (Kotler & Keller, 2006:152; Khedkar, 2015:3).

Because of globalisation and the constant development of emerging technology in today's dynamic world, fuelled by multiple service providers, increasing costs, and demanding customers, it is imperative that companies concentrate on maintaining customer satisfaction and loyalty (refer to Chapter 4, section 4.4 and 4.8) (Demo & Rozzett, 2013:30; Adikaram & Khatibi, 2016:70; Demo, Watanabe, Chauvet & Rozzett, 2017:44; Sota, Chaudhry, Chamaria & Chauhan, 2018:277). The relationship between customer satisfaction and loyalty has been established in many previous studies (e.g., Khedkar, 2015:6; Shaon & Rahman, 2015:32; Nyadzayo & Khajehzadeh, 2016:264; Bin-Nashwan & Hassan, 2017:102; Mokhtar & Sjahruddin, 2019:536; Saputra, 2019:150; Sumantri, Ali & Nugroho, 2020:446) that have investigated customer relationship management in different contexts. As a result, organisations are often looking out for other possibilities to prioritise customers better by providing them with exceptional and desirable services and experiences that may result in satisfaction and relationship loyalty (Demo, 2014:87; Demo et al., 2017:44).

Customer relationship management is therefore considered a realistic method for attracting, cultivating, and sustaining good consumer relationships over time, targeting intended customers with the appropriate product or service at the appropriate time through the right medium, and thus increasing customer profitability and loyalty (Berry, 1995:237; Grönroos, 2007:275; Nyadzayo & Khajehzadeh, 2016:263). CRM in the present-day marketing environment is very applicable (Gummerus et al., 2017:3; Van Tonder & Petzer, 2018:951), as it increases customer value and service quality by understanding and satisfying diverse customers' needs innovatively (Navimipour & Soltani, 2016:1053).

Customer relationship management strategy involves three fundamental dimensions of organisations: their philosophy, technology, and strategy (Abu Amuna, Al Shobaki, Abu-Naser & Badwan, 2017:10; Munyoro & Nyereyemhuka, 2019:221). The success of the CRM strategy is also contingent on the correct stability between the three significant organisational resources: processes, technology, and people (Goldenberg, 2002:7; Chen & Popovich, 2003:676; Braimah & Ihionkhan, 2017:46; Rahimi, 2017:1382). Only by working effectively with these three resources will organisations be able to use customer relationship management to attain great levels of

customer satisfaction and loyalty (Rigo, Pedron, Caldeira, & Araújo, 2016:46; Abu Amuna et al., 2017:10-11).

Thus, relationship building is an activity that needs a strategic outlook, and that cannot be executed by only a few people in an organisation; rather, it is a holistic approach that needs the involvement of everyone in the organisation (Raina & Pazir, 2017:51).

Empirical studies note that organisational adoption of CRM will help anticipate factors that influence customer satisfaction and help in their implementation (Tao, 2014:256; Demo, 2014:87; Adikaram, & Khatibi, 2016:70). Toyese (2014:44) and Rahimi and Kozak (2017:42) agree that, with the heightened state of competition for market supremacy, many businesses have used CRM to enhance business intelligence and decision-making and to improve the quality of their services and product offerings. The starting point of building relationships with customers is thus providing quality services that provide them with benefits (Hussain, Al Nasser & Hussain, 2015:168). When customers enjoy the benefits of an organisations adoption of CRM, they are prompted to trust and commit to that firm (Wali, Wright & Uduma, 2015:45). Relationship investments such as CRM initiatives are critical in influencing the propensity of the consumer to feel committed and to maintain the relationship; CRM investments thus indicate the efforts of the organisation to maintain the relationship (Balaji, 2015:21; Nyadzayo & Khajehzadeh, 2016:263).

Previous related studies that also used customer relationship management theory include Toyese (2014), Tauni et al. (2014), and Khedkar (2015). These authors embraced this theory for its ability to clearly explain the importance and benefits of a customer-centric strategy and a long-term relationship in an exchange process.

3.3.3.3 Benefits and impact of customer relationship management

Customers' demand habits and the life cycle of goods and services are evolving owing to increased competition in the marketplace (Braimah & Ihionkhan, 2017:53). CRM can be used to analyse what consumers expect, what distribution channels they prefer, and what attributes should be integrated into the goods and services (Shaon & Rahman, 2015:26). In this study, for example, CRM is used to investigate the factors influencing customer satisfaction and loyalty. For this reason, relationship managers must endeavor to turn transactional interactions into long-term collaborative relationships through the successful implementation of CRM, to influence consumer behaviour (Roberts-Lombard & Nyadzayo, 2014:792).

Various studies, such as those of Khedkar (2015:2), Shaon and Rahman (2015:26), Santouridis and Veraki (2017:1124), and Rafiki et al. (2019:189), indicate that the effective implementation of CRM offers many tangible and intangible benefits to businesses, such as the following:

- **Increased customer retention and loyalty:** In essence, a consumer is loyal when committed to repurchasing a desired service or product, particularly when there are competitive alternatives and situational pressures that have the potential to trigger switching behaviour (Oliver, 1999:34; Bashir, 2017:293). Shaon and Rahman (2015:26) recommended that businesses invest in customer relationship building and consumer satisfaction, as this in turn would lead to greater loyalty. Munyoro and Nyereyemhuka (2019:224) explained that, when customers are aware of and trust a product, they are likely to come back. Trust is considered an important determinant of customer loyalty (Youcef et al., 2015:3). Santouridis and Veraki (2017:1124) noted that CRM establishes and preserves long-term customer relationships, which is a major problem for service providers because of the difficulty of gaining and retaining market share and improving customer satisfaction and loyalty. Customers who buy a company's product consistently over a long period often tend to produce more revenue, and are relatively inexpensive to service than other customers (Kashani & Shahmirzaloo, 2017:136; Ismană-Ilisan, 2018:84). It is also important to collect all the necessary information on a customer, and to have all the relevant data on the history of a customer readily accessible at all points of access in the organisation; this is essential to the efficiency and effectiveness of the company's performance, and thus to customer loyalty (Munyoro & Nyereyemhuka, 2019:224). Therefore, in order for an organisation to increase its customer retention and loyalty, it needs to develop beneficial cooperative relationships with its customers, as this seems to be the most careful way of keeping track of their changing demands and meeting them appropriately for profit (Sheth, Parvatiyar & Sinha, 2015:126).

- **Increased profitability:** Customer relationship management is the entirety of a business, as it is the engine of a responsible, efficient, and customer-oriented company (Wali et al., 2015:45). Rafiki et al. (2019:189) and Nwakuna (2017:57) found that CRM technologies have the potential to minimise operating costs, increase profitability, and speed up service delivery, which establishes the organisation's sales management base and its existing customers. Kashani and Shahmirzaloo (2017:136) explained that the more efficiently a business uses its customer information to fulfill their needs, the more

profitable it will be for the organisation. With CRM, consumers with great potential for generating revenue can be identified and targeted (Nwakuna, 2017:57). In market situations, when relationships start building up between a firm and a customer, the customer starts to have feelings of trust, and ends up spending more than they would normally have done before the relationship (Amoako et al., 2012:19; Bashir, 2017:293; Munyoro & Nyereyemhuka, 2019:224). This shows that customer profitability will improve as consumer wallet share rises, and more referrals will come as customer satisfaction increases (Amoako et al., 2012:19). Therefore, in order for the firm to increase its profitability, it must pursue a customer-centric strategy such as CRM, which focuses on personalising and customising services and products to meet the needs and wants of individual customers (Rafiki et al., 2019:187).

- **Customisation of products and services:** CRM is rooted in the premise that each customer is different, and so strives to meet each individual's needs and wants (Ismană-Ilisan, 2018:81). Recent marketing procedures are close to providing personalised and customised services; this is why the acquisition of large volumes of customer details and information has become a fundamental requirement in efficiently meeting customer expectations, delivering accurate service and building a mutually satisfying long-term relationship with customers (Shaon & Rahman, 2015:26; Hassan, 2020:22). Rafiki et al. (2019:189) noted that CRM projects help firms to gain a sustainable marketing advantage by facilitating the provision of differentiated products and offering incomparable service. In order to meet each individual need and want, the firm must embrace a CRM strategy in its operations, as this will help to reduce processing times and raise the quality of products and services, since customer feedback and opinions will be adopted during production and service delivery (Hassan, 2020:22).

- **Maintaining lower process times and raising the quality of products and services:** Products and services and internal processing systems are directly influenced by CRM activities (Shaon & Rahman, 2015:27). Braimah and Ihionkhan (2017:54) highlighted that contradictory details, inaccurate data entry, and poor service tend to be the result of a lack of a multi-dimensional customer view. CRM can therefore assist with reducing operational costs through productive relationships with customers, and decreasing the size of the overall process (Kashani & Shahmirzaloo, 2017:136), as the cost of delivering services to current customers is lower than the cost of attracting new customers (Ismană-Ilisan,

2018:84). The relationships also become more successful with a better knowledge of outlets and distributors, and minimise marketing campaign costs (Amoako et al., 2012:19; Kashani & Shahmirzaloo, 2017:136). Marketing efficiency is improved with CRM by cooperative and collaborative processes that help to reduce transaction costs and the company's overall operating costs (Parvatiyar & Sheth, 2001:5). Maintaining lower process times and increasing the quality of products and services requires firms to adopt a customer oriented strategy such as CRM, which is adopted holistically by every department in an organisation and brings about co-operation and synchronisation (Rafiki et al., 2019:193).

- **Improving co-operation and synchronisation:** A good CRM model contributes significantly in improving interactions among a company's various departments, such as marketing, sales, and production departments (Nwakuna, 2017:57). Enterprise resource planning is a method for back-office automation that helps to automate many functions in an organisation, such as accounting, innovation, production, customer orders, etc. However, CRM is the front-office automation solution (examples are marketing and product information, consumer contacts, pre-and-post sales facilities, and complaint handling unit) (Krishna & Ravi, 2016:30). It is important that these two systems incorporate and compare information with each other, as well as business and work flow (Nwakuna, 2017:57). The integration of CRM and enterprise resource planning for businesses goes a long way in improving customer service. In order to achieve improved co-operation and synchronisation, firms need to embrace a customer-intimate strategy such as CRM, which is totally focused on ensuring that customers are satisfied with the services or products offered, as this will encourage them to be loyal (Croteau, & Li, 2003:22; Das, Mishra, & Mohanty, 2018:96).
- **Improved customer satisfaction and loyalty:** Customer satisfaction is the central element in successfully implementing CRM for good customer retention (Long, Khalafinezhad, Ismail & Rasid, 2013:247). There is a great likelihood that customers' involvement in the development and delivery of a service will increase their level of satisfaction (Ismană-Ilisan, 2018:84). This means that, in order for customer loyalty to increase, it is necessary first for CRM to be implemented (Shaon & Rahman, 2015:28). This suggests that consumer loyalty requires more attention from businesses, because loyalty will eventually impact their success (Kashani & Shahmirzaloo, 2017:136). Therefore, in order to improve customer satisfaction and loyalty, firms must be able to

anticipate and meet customer expectations by implementing a CRM strategy that will address their needs and wants promptly (Toyese, 2014:45).

- **Meeting customer expectations:** To meet organisational goals, one of the imperative criteria for a firm is to determine the needs and wants of its consumers and to immediately provide products and services that proactively address those needs and wants more efficiently than its competitors do (Toyese, 2014:45; Nwakuna, 2017:57). Therefore, through effective CRM, a firm is able to meet customer expectations (Shaon & Rahman, 2015:27; Kashani & Shahmirzaloo, 2017:136). This includes CRM that can help the organisation to communicate clearly and effectively with customers. This is done to strengthen the relationship with consumers by knowing them and their needs; to retain them by providing personalised quality-based products; and to attract new customers by offering good offers, raising revenue, and reducing consumer maintenance costs (Bashir, 2017:293). When customer expectations are consistently met, there is a high tendency for the customer to become committed to the organisation and to find it trustworthy (Munyoro & Nyereyemhuka, 2019:224). Thus meeting customers' expectations requires firms whole-heartedly to imbibe CRM as its fore-most strategy.

3.3.4 Commitment and trust theory

Commitment and trust theory, developed by Morgan and Hunt (1994:20), is regarded as one of the most relevant and effective relationship theories to date (Abdullah, Putit & Teo, 2014:373). The theory describes the presence of trust and commitment as key elements of stable relationships, because they lead directly to collaborative behaviours that are advantageous to relationship success (Morgan & Hunt, 1994:22; Nyadzayo & Khajehzadeh, 2016:263). Both of these factors (discussed broadly in Chapter 4, sections 4.5 and 4.6) encourage marketers to concentrate on co-operation to maintain investment relationships, to anticipate long-term gains from staying with current customers rather than enticing short-term alternatives, and to assume consumers would not respond to opportunistic behaviours (Morgan & Hunt, 1994:22; Li, et al., 2015:1045).

It is also important to emphasise that trust influences commitment; relationships distinguished by trust are cherished by exchange partners, who will have a reinforced desire to commit themselves to such relationships (Morgan & Hunt, 1994:24; Goodman & Togna, 2014:38; Balaji, 2015:21; Clark, Fine & Scheuer, 2017:45), which will lead to customer loyalty (Rather et al.,

2019:211). In essence, the committed customer trusts that the relationship is valuable, and so works to make sure that it endures indefinitely (Morgan & Hunt, 1994:23; Clark et al., 2017:45). One way in which customers develop commitment and trust towards a business organisation over time is when organisations consistently provide quality service (Haghkhah, Rasoolimanesh & Asgari, 2020:32).

3.3.5 Service quality theory

According to Zeithaml (1988:3), service quality can be conceptualised as the consumer's assessment of a service's overall excellence or supremacy. In order to assess customer satisfaction with service quality, one must equate the anticipated service by the customer with the perceived service (Yang & Chao, 2017:682). The service quality will be satisfactory if services are received as expected; however' if the services received surpass expectations, this will result in delighted customers, and service quality will be perceived as excellent - and and the opposite also holds true (Parasuraman et al., 1988:15; Hussain et al., 2015:168).

So, for the business organisation, the ability to deliver service quality depends on consistently meeting the needs and expectations of customers. This in turn will generate various benefits for the organisation, such as recommendations by positive word-of-mouth, creating a good corporate image and reputation, increasing profits, and building strong long-term relationships with customers (Hussain et al., 2015:168) (refer to Chapter 4, section 4.2.5 for further explanation). Therefore, determining what customers view as satisfactory service quality depends on their expectations.

Previous related studies that also used this service quality theory include those by Kushwah and Bhargav (2014), Ingy and Hazem (2016), and Ramadania et al. (2018). These authors embraced this theory for its ability to explain and predict consumer behaviour when customers consistently receive high service quality that meets their expectations.

3.3.6 Expectation disconfirmation theory

Expectation disconfirmation theory (EDT) by Oliver (1977:481) explains the definition of customer satisfaction, which is a customer's post-purchase evaluation and affective response to the overall product or service experience, and is applicable in the consumer behaviour literature (Akanferi, Asampana & Tanye, 2019:4). The EDT paradigm involves four major constructs: expectation, performance, confirmation, and satisfaction (Quoquab, Mohammad, Yasin & Abdullah, 2018:1089).

This means that, if the customer receives service according to expectation or better than anticipated, then a positive disconfirmation ensues, leading to satisfaction (refer to Chapter 4, section 4.4); whereas, if the service does not match expectations, a negative disconfirmation ensues, leading to dissatisfaction (Saleem & Raja, 2014:706; Quoquab et al., 2018:1089). In the future, dissatisfied customers will avoid using the goods or services again. In reality, prior to purchase, customers have already developed certain expectations about a product or service. After purchasing the product or having experienced the service, their expectation will determine their degree of satisfaction and their potential intention to repurchase (Susanto, Chang & Ha, 2016:510).

Providing what customers really need and want is a good way to ensure that customer satisfaction is achieved (Wanjiku, Ombui & Iravo, 2016:1625). But over time, consumers' needs and wants change. It is important for a service firm to tackle this issue. Therefore, in order to gain competitive advantage in a rapidly changing world, businesses must constantly adapt their business strategies to suit that environment, by adopting a marketing strategy that can consistently predict customer's expectations (Wanjiku et al., 2016:1625).

When customers consistently enjoy the antecedents of customer satisfaction, the service offering will be perceived as high value, leading to a long-term relationship (Calvo-Porral et al., 2017:720; Munyanti & Masrom, 2018:11), thus making relationship satisfaction greater in the presence of trust (Balaji, 2015:21). Therefore, as satisfaction is associated with meeting the needs of customers, the repeated fulfilling of these needs leads to commitment (Balaji, 2015:21; Dasanayaka et al., 2020:4), which leads to customer loyalty (Yusuf, 2017:8; Ramadania et al., 2018:1920). Previous related studies that also used expectation disconfirmation theory include those by Alabar et al. (2014) and Saha, Islam and Hoque (2016). These authors embraced this theory for its ability to explain factors that influence customer satisfaction and how customers will react when their expectations are either met or not met.

3.4 CONCLUSION

This chapter explained the various theories grounding this study. Of particular interest, the study adopted the theory of social exchange. In this chapter, this theory has been discussed in relation to its supporting theories of relationship marketing theory, customer relationship management theory, commitment and trust theory, service quality theory, and expectation disconfirmation theory. This was done to help project the importance of the relationship marketing concepts that form the basis of the current study.

The purpose of all the theories described above is to provide an organised framework that, at the minimum, explains the nature of the relationship between all the factors guiding contemporary consumer behaviour.

Over the years, marketing and its strategies have evolved, as customer expectations and needs keep growing. However, marketing theories have remained relevant and accurate in predicting and describing the marketing principles of exchange and consumer behaviour. To survive in the modern-day competitive business scene, firms must keep their customers as their primary focus, while finding innovative ways to keep them satisfied and loyal.

The factors influencing customer satisfaction and loyalty are discussed in the next chapter.

CHAPTER 4

FACTORS INFLUENCING CUSTOMER SATISFACTION AND LOYALTY

4.1 INTRODUCTION

This chapter is devoted to a review of the literature on the factors influencing customer satisfaction and loyalty. The theories discussed in Chapter 3 explained the consumer-business exchange process, how relationships are formed, and how they lead to customer satisfaction and loyalty. This section therefore draws on relevant previous academic literature (such as Chakraborty & Sengupta, 2014; Siong et al., 2015; Adebiyi et al., 2016a; Kasbekar, 2017; Opele et al., 2018) on the factors influencing customer satisfaction and loyalty, to back-up the theories discussed in Chapter 3. The hypotheses for this study are presented by creating literature-based relationships between the research's constructs. The chapter ends by setting out the study's conceptual structure, detailing the CRM factors (customer service, price fairness, network quality, diversity of products, and overall service quality; refer to section 4.10) that influence customer satisfaction and loyalty, mediated by the relationship between satisfaction, trust, commitment, and switching costs, with all of these dimensions leading to customer loyalty.

4.2 LITERATURE REVIEW OF PREVIOUS STUDIES AND FACTORS INFLUENCING CUSTOMER SATISFACTION AND LOYALTY

Customers are becoming the focal point in the modern business/-marketplace, and organisations are striving to meet their customers' needs through customised production with the aim of keeping them satisfied and loyal (Tauni et al., 2014:54). The competition among business organisations is also tough, as their inability to retain existing customers has become worrisome (Izogo, 2016:748; Akbar, Soomro & Khan, 2017:33).

The global telecommunications industry is not left out of the present-day competitive nature of the marketplace. However, the development and advancement of the global telecommunications industry has played a key role in the socio-economic growth and development of both developed and developing nations, and this has made it one of the most important rapidly growing industries in the world (Ogungbade, 2015:270; Ofori et al., 2015:157; Nekmahmud & Rahman, 2018:340).

The global growth of the telecommunications industry is very evident in the telecommunications sector in sub-Saharan Africa (SSA), as it has prompted major restructuring in the region over the

last 10 years, with the Nigerian telecommunications industry leading the way (Bresson & Bisson, 2011:50; The Mobile Economy sub-Saharan Africa, 2020:2). The Nigerian telecommunications industry is currently considered the leading mobile telecommunications market in sub-Saharan Africa in terms of subscriber base, tele-density, and inflow of Foreign Direct Investment (Izogo, 2016:746; The Mobile Economy sub-Saharan Africa, 2020:2; NCC, 2019).

However, barely two decades after the introduction of GSM (Global System for Mobile Communications) to the Nigerian telecommunications industry, it is uncertain whether mobile network subscribers in Nigeria have any reason to be loyal to any network provider, given the rate at which consumers switch to different network providers and the number of Subscriber Identification Modules (SIMs) that many consumers use (Inegbedion & Obadiaru, 2019:584). There also appears to be a perpetual tariff tussle between the industry's top mobile telecommunications network providers, which may not be unrelated to the industry's oligopolistic nature (Chidiebere, 2017; Penelope, 2016). In this fiercely competitive market, customers are demanding tailored products and better services at lower prices (Saroha & Diwan, 2017:16).

In order to thrive in the ferocious mobile telecommunications industry, efforts must be made by network providers in Nigeria to understand their customers' needs, and to satisfy these needs better than the competition can in order to win their customers' unwavering loyalty. To this end, this study sought to research the factors that influence customer (mobile subscribers) satisfaction levels that will enable subscribers to remain loyal to the various mobile network service providers in the Nigerian mobile telecommunications industry.

Various researchers have highlighted the different factors responsible for influencing or determining customer satisfaction in the telecommunications sector, as shown in Table 4.1.

Table 4. 1: Various studies highlighting different factors responsible for influencing or determining customer satisfaction in telecommunications

DATE WRITTEN	PATH	AUTHORS / REFERENCE
2014	Generic requirements, price, functional quality, and flexibility lead to customer satisfaction.	Chakraborty, S. & Sengupta, K. (2014). Structural equation modelling of determinants of customer satisfaction of mobile network providers: Case of Kolkata, India. *Indian Institute of Management Review*, 26(4):234-248.
2015	Customer service, price, network quality, and diversity of products lead to customer satisfaction.	Siong, C.C., Wendy, M.Y.T. & Ye, Q. (2015). Comparing customer satisfaction with China mobile and China telecom services: An empirical study. Proceedings of the Australasian Conference on Business and Social Sciences, Sydney (in partnership with The *Journal of Developing Areas*), 1083-1093.
2015	Service quality, price perception, value offers, and brand image lead to satisfaction.	Ogungbade, D.R. (2015). Exploring the relationship between relationship marketing, relationship quality and customer loyalty in Nigerian telecommunication industry. *Global Journal of Emerging Trends in e-Business, Marketing & Consumer Psychology*, 1(2):269-281
2016	Service quality, customer care services, promotional strategies, price/billing lead to customer satisfaction.	Adebiyi, S.O., Shitta, H.A. & Olonade, O.P. (2016a). Determinants of customer preference and satisfaction with Nigerian mobile telecommunication services. *BVIMSR Journal of Management Research*, 8(1):1-12.
2016	Customer expectation, perceived quality, and perceived value lead to customer satisfaction.	Alqahtani, S.S. & Farraj, H.A. (2016). Customer satisfaction with mobile services in telecommunication companies. *Journal of Competitiveness Studies*, 24(3):128-144.
2016	Price/call rates, network quality and product/service diversity, and customers' facility lead to customer satisfaction.	Saha, N., Islam, M. & Hoque, A. (2016). Factors affecting customers' satisfaction of mobile phone subscribers: An empirical study on mobile telecommunication industry in Bangladesh. *International Journal of Business and Management*, 11(6):252-261.

DATE WRITTEN	PATH	AUTHORS / REFERENCE
2017	Network performance: Network availability, connection establishment (accessibility), connection maintenance (retainability); and customer service Quality: metering and billing, Response time to the customer for assistance, termination/closure of service all lead to customer satisfaction.	Kasbekar, M. (2017). How satisfied Is my Customer? An evaluation of customer satisfaction of cellular service providers in the region of Mumbai with special reference to Tata Docomo. *International Journal on Customer Relations*, 5(1):31-36.
2018	Consumer preference, service assurance, service empathy, service reliability, and service responsiveness lead to customer satisfaction.	Opele, A.M., Afolabi, O.J. & Onifade, T.A. (2018). Consumers' preference and satisfaction of GSM service providers among students of tertiary institutions in Lagos State, Nigeria. *Nigerian Journal of Technology (NIJOTECH)*, 37(4):1099-1109.
2018	Network quality, pricing, and customer care lead to customer satisfaction.	Bakare, A.A. & Fetuga, O.M. (2017). How does customers' satisfaction affect business performance? Evidence from Nigeria. *Osogbo-Journal of Management (OJM),* 2(3):80-90.
2018	Quality of services, network connectivity, billing/pricing, customer service, and delighting promotion lead to customer satisfaction.	Munyanti, I. & Masrom, M. (2018). Customer satisfaction factors towards mobile network services. *Journal of Advanced Research in Business and Management Studies*, 13(1):9-18.

This study therefore focused on a combination of relevant and specific factors from different researchers, as presented in Table 4.1 (Siong et al., 2015; Saha et al., 2016; Bakare & Fetuga, 2017; Munyanti & Masrom, 2018), which until now have not been reviewed holistically. The study specifically considered customer service, price fairness or billing, network quality, diversity of products, and overall service quality, as they are the most examined factors in the literature as influencing customer satisfaction and loyalty in the mobile telecommunications sector. These factors have a great impact on customer satisfaction, and play an important role in maintaining and developing customer relationships.

The next section will explain the factors considered by this study (customer service, price fairness or billing, network quality, diversity of products, and overall service quality) that - influence customer satisfaction and loyalty in the telecommunications industry.

4.2.1 Customer service

According to Oghojafor et al. (2014:73), customer service or care is defined as customer support systems, complaint processing, speed of complaint processing, ease of reporting complaints, and friendliness when reporting complaints (Kim et al., 2004:151; Nwakanma et al., 2018:4). Customer service thus includes all support rendered or proposed to subscribers prior to, during, and after a purchase, with the intention of satisfying the customer experience with the services provided (Nwakanma et al., 2018:4). Oghojafor et al. (2014:73) pointed out that exceptional customer service goes beyond words said or activities carried out for the customers, but also entails giving customers room to express their feelings.

Customer service can occur on-site, over the phone, or via the Internet (Adebiyi et al., 2016a:4). Today's telecommunications industry should not only depend on technological platforms, but must also incorporate a sense of human contact in customer relationships (Dahal, 2019:137); that is why mobile telecommunications companies operate customer service call centres, often staffed around the clock and all year round (Feinberg, Kim, Hokama, De Ruyter & Keen, 2000:131; Adebiyi et al., 2016a:4).

In their studies, Feinberg et al. (2000:132) and Grigoriou, Majumdar and Lie (2018:13) noted that call centres are the latest battlefield over customer satisfaction, and offer businesses the opportunity to distinguish themselves from their rivals. Consequently, employees will need professional competence, be willing to assist, and have the intention of making meaningful contributions to their organisations (Siong et al., 2015:1085). This is because, when complaints are not managed appropriately, customers will have grievances and begin to seek out other service providers (Malhotra & Malhotra, 2013:15; Siong et al., 2015:1085). Adebiyi et al. (2016b:56) made it known that, for organisations to enjoy customer satisfaction and loyalty in their customer relationship-building process, quality customer service is essential. At the same time, the courtesy and civility of service personnel registers a positive impression on customers, which leads to their satisfaction (Abiad, Kadry, Ionescu & Niculescu, 2019:52). Previous research (Adebiyi et al., 2016a:8; Kasbekar, 2017:33; Munyanti & Masrom, 2018:17; Bakare &

Fetuga, 2017:85) found a positive and significant relationship between customer service and satisfaction. Based on these results, the researcher proposed the following hypothesis:

H1: There is a direct and positive relationship between customer service and customer satisfaction in the Nigerian mobile telecommunications industry

4.2.2 Price fairness

From consumers' point of view, price is defined as what is given up or sacrificed to obtain a product or service (Zeithaml, 1988:10; Konuk, 2019:104). Price is also defined as an amount of money being charged for a product or service, or a sum of value that customers exchange for the benefit of having or using the product or services (Kotler & Armstrong, 2016:324; Munyanti & Masrom, 2018:11). Price factor is a consumer behaviour determinant in an exchange process that is used to identify consumer satisfaction and loyalty (Hossain, Chowdhury & Jahan, 2017:923; Ali, Yee, Imm & Akhtar, 2018:45). Sharma and Panga (2018:109) and Ogungbade (2015:272) agreed that there are four subcategories of pricing issues that may lead to dissatisfaction and switching to alternatives: high perceived prices, deceptive prices, unfair pricing practices, and price increases. Nevertheless, pricing structure takes a new dimensional perspective when businesses move their emphasis from earning profits to offering their customers value (Akbar et al., 2017:34).

Price fairness is therefore defined as the consumers' total evaluation of whether the offered price of a service provider's product or service is really reasonable, and can be accepted or justified (Xia, Monroe & Cox, 2004:3; Hanaysha, 2016:33). Customer satisfaction here is evaluated with reference to the preferred services and the price level that customers are prepared to pay (Dahal, 2019:137). In the telecommunications industry, prices are not only limited to call rates, but also cover recharge vouchers, SMS fees, Internet fees (data), and other services (Nwakanma et al., 2018:4).

Price fairness plays a major part in customer satisfaction and loyalty, as it is perceived by many customers to be an extrinsic or tangible signal of service or product quality (Chakraborty & Sengupta, 2014:240; Siong et al., 2015:1086; Azam & Karim, 2017:119; Yusuf, 2017:7). Nwakanma et al. (2018:4) also noted that widespread network coverage alone is not sufficient to attract or retain customers in the telecommunications market, and that delivering services at an attractive and fair rate is equally important to ensure market satisfaction. Presently, because

of aggressive competition, mobile telecommunications service providers have opted to offer innovative services and flexible prices just to attract more customers (Haque, Rahman & Rahman, 2010:20). Customers only feel contented if the price they pay for the product or service is equal to or greater than what they actually receive (Siong et al., 2015:1085; Hossain et al., 2017:923; Yaqub et al., 2019:66). According to Dhasan and Aryupong (2019:87), when customers are offered a fair price by a network provider, positive feelings towards that network provider develop gradually, which will eventually evolve into behavioural intentions such as repeat subscriptions, positive word-of-mouth, and establishing a relationship.

Another way that subscribers view price fairness is by comparing the quoted price with alternatives or other reference points such as the price that customers have paid in the past, the price that is charged by competitors, and the price that is paid by other consumers, and that would be evaluated as unfair in the case of a price increase (Dhasan & Aryupong, 2019:85). A notable social exchange factor is distributive justice, which argues that people judge the fairness of an exchange agreement on the basis of the equal distribution of rewards in proportion to what they have invested in the transaction (Zietsman et al., 2019:4) (refer to Chapter 3 section 3.3.1 for further explanation).

In the Nigerian mobile telecommunications industry specifically, fair price offers (low prices) have been used as a strategic competitive tactic both to attract new subscribers and, more importantly, to maintain existing ones in a market where it is difficult to perceive any notable difference in the service quality of most mobile network providers (Adebiyi et al., 2016a:6; Hossain et al., 2017:923).

Furthermore, in Nigeria, despite the fact that most of the mobile network providers have broken even, their tariffs are still very high (Afolabi & Ojo, 2015:60). This has prompted the demand for fairer tariffs (Kadiri & Lawal, 2019:2). Telecommunications service providers in Nigeria should charge subscribers fair and reasonable tariffs, considering the price sensitivity of customers and its effects (Nwakanma et al., 2018:4; Yaqub et al., 2019:66).

Previous research (Chakraborty & Sengupta, 2014:243; Siong et al., 2015:1089; Munyanti & Masrom, 2018:17; Putu, & Ekawati, 2020:497) found a positive and significant relationship between price fairness and satisfaction. Based on these results, the researcher proposed the following hypothesis:

H2: There is a direct and positive relationship between price fairness and customer satisfaction in the Nigerian mobile telecommunications industry

4.2.3 Network quality

'Network quality' refers to the vastness, speed, and strength of the network signal (Munyanti & Masrom, 2018:11). Saha et al. (2016:254) explained that network quality measures the signal of the mobile phone network coverage, the time required to connect the caller to the dialed receiver number, the frequency of dropped calls, the level of voice clarity, and the duration of sending and receiving of short messages.

Network quality is considered a trigger of competitive advantage in the mobile telecommunications industry, as it is a focal point for attracting and retaining customers (Hossain et al., 2017:923). Network coverage is an important aspect of customer satisfaction, as it relates to ensuring the mobile service availability that the customers expect (Jere & Mukupa, 2018:122). This makes it an important element that customers use to assess mobile service quality (Abiad et al., 2019:52).

Bakare and Fetuga (2017:85) established that the network quality of mobile services is one of the major challenges facing mobile network subscribers in Nigeria, and customers' perception of network quality strongly affects their view of mobile operators and their satisfaction level. When network quality, such as downloading and uploading speed, system response time, call quality and coverage, and network issues, such as dropped calls, static and interrupted cell phone calls, do not match expectations, customer complaints result (Thaichon, Lobo & Mitsis, 2014:276; Siong et al., 2015:1086). This level of dissatisfaction will prompt customers to switch to competitors that have more who have extensive network coverage (Hossain et al., 2017:923; Nwakanma et al., 2018:4).

The absence of adequate transmission infrastructure in the Nigerian mobile telecommunications sector has affected not only the mobile network providers but also the customers, who are at the receiving end (Adediran et al., 2016:22; Omiunu, 2017:46). This has caused a setback in network quality and overall service quality, leading customers continually to seek out a mobile operator that can meet this need, as it has also encouraged the possession of multiple SIMs (Izogo, 2016:746). It is noteworthy that the NCC has, since its enactment and deregulation, created a conducive and enabling environment for mobile telecommunications network providers to be able to meet customer (subscriber) expectations and ensure adequate network provision (Chidozie et al., 2015:178; NCC, 2019). Most of these mobile network providers have

fallen short of expectations over the years, and this has forced the Nigerian Senate (the Upper Chamber of Nigerian National Assembly) and the NCC to summon and sanction the erring network providers on behalf of the government (Iroanusi, 2019).

It is also common to see Nigerians carrying several mobile phones, or mobile phones with multiple SIMs, as customers seek to capitalise on the different promotional offers and network marketing strength of different mobile network providers (Izogo, 2016:746; Morgan & Govender, 2017a:2). This is because the inter-connectivity between different mobile networks is still very poor (Isaiah et al., 2019:8). This, with other network-related issues such as high drop call rates, has prompted the Nigerian Senate on different occasions to summon and urge the NCC to direct mobile network providers to expand the network infrastructure, and to monitor compliance (Iroanusi, 2019). These are areas of challenge that have lingered for years in the industry, and they must be addressed as soon as possible for the sake of the future of the industry (Adediran et al., 2016:22). MTN and Glo have taken up this challenge, and are at the fore front of adopting new technologies and expanding their network reach and quality, with MTN laying new fibre-optic cables and Glo launching the Glo 2 submarine cables (Akinsanmi, 2019; Emejo, 2019).

The key growth drivers of the industry that must be adopted by mobile telecommunications network providers in Nigeria will therefore be the deployment of adequate network infrastructure with high network capacity in both urban and rural areas, such as new global submarine fibre projects, aggressive push to deploy fibre to the x infrastructure (FTTx are various technological and deployment options developed to enable reach of fiber as close to the user location as possible to provide high speed data and voice services) (HFCL, 2021) and satellite transmitter installation, conformity with radiation specifications, spectrum management, consolidation and collaboration with other mobile network providers, and the introduction of new telecommunications technologies such as the current roll-out of 5G services owing to the explosion of data and video services, and demands resulting from the increase in call drops (Dahal, 2019:138). This will enhance the provision of strong and extensive network coverage, and a stable and unfluctuating signal in all major areas of the country, and will produce customer satisfaction, which leads to customer loyalty (Nwakanma et al., 2018:4).

Previous research (Thaichon, Lobo & Quach, 2016:54; Saha et al., 2016; Kasbekar, 2017:33; Bakare & Fetuga, 2017:85; Nwakanma et al., 2018:9; Dahal, 2019:137; Ting et al., 2020:248) has found a positive and significant relationship between network quality and customer satisfaction. Based on these results, the researcher proposed the following hypothesis:

H3: There is a direct and positive relationship between network quality and customer satisfaction in the Nigerian mobile telecommunications industry

4.2.4 Diversity of products

Du (2018:30) defines 'product diversity' as the extent to which a firm delivers products and services in a broad spectrum of categories. In their study, Saha et al. (2016:254) defined 'diversity of products' as the wide array of product or services and facilities offered by a mobile network provider. Product diversification can thus serve as a marketing strategy and a competitive edge that organisations offer to satisfy individual customers' needs (Siong et al., 2015:1086). Siong et al. (2015:1086) also observed that product diversification and heterogeneity have a strongly positive influence on the choice of telecommunications service, as consumers are likely to be more satisfied with additional services being offered when other conditions, such as price and service quality, remain constant.

Oluwafemi and Adebiyi (2018:103) explained that the deregulation of the Nigerian telecommunications sector brought intense rivalry with it and that, therefore, for network providers to win the hearts of subscribers, they must endeavour to provide more sophisticated and diversified products or services. Examples includes m-commerce and mobile banking, location-based services (such as Glo's 'work from home' data initiative), a business SIM card, data-only or data and other service bundles, over-the-top (OTT) service increases such as VoIP services, which allow cheaper or free voice calls using the Internet, and an artificial intelligence personal digital customer assistant. Mobile Number Portability (MNP) implementation in Nigeria has also made it more difficult for network providers to remain lacklustre because they offer similar products and services to the same market (Oyatoye, Adebiyi & Amole, 2015a:174).

Saha et al. (2016:254) noted that value-adding services and promotional deals help to distinguish a network provider's service features from those of its competitors. In addition to making or receiving calls from their mobile phones, mobile network subscribers are demanding more services and facilities from their network providers (Dahal, 2019:137). They are now deciding not only which of the network providers to choose, but also which of the network providers is better adapted to meet their economic, social, and psychological needs (Oyatoye et al., 2015a:172).

Dahal (2019:137) added that product diversity and customer facilities have a greater influence on customers, particularly the younger generation, who look beyond pricing for the value generated by products and services. Oluwafemi and Adebiyi (2018:103) suggested not only that

these products and services be offered subscribers, but also that the information that describes them be effectively communicated and made available to them. The degree of product variety and customization influences the customer satisfaction level, and thus service choice (Siong et al., 2015:1086).

Previous research (Siong et al., 2015:1089; Pojoh et al., 2019:4550; Tjahjaningsih et al., 2020:485) has found a positive and significant relationship between the diversity of products and customer satisfaction. Based on these results, the researcher proposed the following hypothesis:

H4: There is a direct and positive relationship between the diversity of products and customer satisfaction in the Nigerian mobile telecommunications industry

4.2.5 Overall service quality

'Service quality' refers to the measurement of how well the service delivered consistently matches customers' expectations (Parasuraman, Zeithaml & Berry, 1988:15; Ramadania et al., 2018:1920). Thus, service quality is the extent to which the service offering meets the standards and expectations of the customer, thereby creating an impression of the relative inferiority or superiority of an organisation and its service offerings (Bitner, Booms & Tetreault, 1990:72; Rashmi & Krishnakumar, 2015:160).

Akbar et al. (2017:34) point out that the only time that service quality makes a big difference is when all other variables are close to constant. No other competitive edge has long-term sustainability except service quality. According to Parasuraman, Zeithaml and Berry (1985:42), services have three distinct characteristics - intangibility, inseparability, and heterogeneity - that must be acknowledged in order to understand service quality.

Grönroos (1984:37) defined 'service quality' as the outcome of an evaluation process in which consumers compare their expectations with the service they perceive they have received i.e., they assess the perceived service against the expected service. The two dimensions of service quality proposed by Grönroos (1984:38) are its technical quality and its functional quality.

- Technical quality is the core service quality of the product-or service-related offerings (i.e., what the consumer receives as a result of their interactions with the firm).
- Functional quality is relationship-based, and is formed from the interactions between the customer and the service provider (Rashmi & Krishnakumar, 2015:160).

A number of service quality definitions admit that service quality necessitates adapting to customer expectations, which are adopted when they perceive that they are receiving a certain standard of service (Amoako, 2012:135; Quoquab et al., 2018:1092; Zietsman et al., 2019:6). This opinion is founded on expectation disconfirmation paradigm (explained in Chapter 3, section 3.3.6).

However, service quality dimensions vary from industry to industry (Hafez & Akther, 2017:142). This study therefore focused on the overall service quality that mobile telecommunications provides. Based on the literature review, the researcher identified various factors as items for conceptualising overall service quality: the ability to communicate seamlessly with other networks, good voice quality, responsive service calls, proactive customer service, accurate billing details, diversified service offerings, and timely bills for postpaid connections (Chakraborty & Sengupta, 2014:238; Siong et al., 2015:1086; Ogungbade, 2015:272; Adebiyi et al., 2016b:56; Mayaka & Oloko, 2018:312).

When paying for products or services, the customer seeks to create a series of tangible cues in order to judge quality (Hu, Kandampully & Juwaheer, 2009:112; Roberts-Lombard & Nyadzayo, 2014:793). This has made customers more difficult to satisfy, owing to their growing exposure to available alternatives; the search for exceptional service quality is thus becoming more evident (Yaqub et al., 2019:66). Higher service quality achievements are therefore gaining the highest priority in service marketing because they will result in a range of expected consumer actions such as positive word-of-mouth, decreased customer dissatisfaction, and improved company efficiency (Mohtasham, Sarollahi & Hamirazavi, 2017:231). Other advantages of service quality are recurring sales and increased market share, improved customer retention, higher profitability, lower employee turnover, and customers' favourable behavioural intentions (Rashmi & Krishnakumar, 2015:160; Calvo-Porral et al., 2017:720).

Consequently, when customers experience a high standard of service quality, they will have an increased commitment and trust - as long as a premium price is charged (Haque et al., 2010:19; Calvo-Porral et al., 2017:720; Ogungbade, 2015:272; Munyanti & Masrom, 2018:11).

In competitive business environments such as the Nigerian mobile telecommunications sector, companies should embrace service quality as a principal differentiator and a core factor of their business strategy, as customers use service quality to distinguish between competing organisations (Hafez & Akther, 2017:142; Ofori et al., 2018:584). Hence, service quality will help to solidify the bond between customers and the organisation, as it is a two-way value flow

(Sharma, 2017:7). Aydin, Ozer and Arasil, (2005:92) and Quoquab et al. (2018:1092) explained that, in the mobile phone service context, the general assessment of a subscriber is not based on satisfaction or dissatisfaction with a one-off service transaction; rather, it is influenced by all the service experiences that are involved in becoming a subscriber. It is therefore important that business organisations assess their overall service delivery at every decisive phase in order to improve their marketing strategies (Chen, 2016:35; Yaqub et al., 2019:66).

Previous research has found a positive relationship between overall service quality and customer satisfaction (Adebiyi et al., 2016a:8; Opele et al., 2018:1107; Munyanti & Masrom, 2018:17). Based on these results, the researcher proposed the following hypothesis:

H5: There is a direct and positive relationship between overall service quality and customer satisfaction in the Nigerian mobile telecommunications industry

4.3 CUSTOMER SATISFACTION

Satisfaction is one of the primary factors used to explain consumer behaviour in research models (Konuk, 2019:105). According to Oliver (2014:8), customer satisfaction is a person's judgement of pleasure or disappointment resulting from comparing a service outcome with the expectations of consumption-related fulfillment, including levels of under-or over-fulfillment. If the performance falls below expectations, the customer is dissatisfied; whereas, if the performance matches the expectations, the customer is satisfied (Shah et al., 2018:363).

Customer satisfaction can also be described as the degree to which a business's product or service performance matches up to the expectations of the customer (Armstrong & Kotler, 2005:17). While Fornell (1992:11) defines customer satisfaction as "an overall post-purchase evaluation", based on this review, customer satisfaction is defined as the result of a cognitive and affective evaluation in which some standard is compared with the performance actually perceived. If the perceived performance is less than expected, customers will be dissatisfied (Al-Hersh & Saaty, 2014:82).

All of the above definitions, like many others on customer satisfaction studies, have used the expectation disconfirmation theory (previously explained in Chapter 3, section 3.3.6).

The end goal of any organisation is to ensure that the customers who purchase its product or patronise its service are satisfied; this signals the health of the exchange relationship (Roberts-Lombard & Nyadzayo, 2014:794). It is essential to mention that whether or not the customers' expectations have been met is entirely dependent on the customer's perception (Roberts-

Lombard & Nyadzayo, 2014:794; Rashmi & Krishnakumar, 2015:160). This makes understanding the needs and expectations of customers a big marketing weapon (Raghavendra, Mallya & Mukherjee, 2019:1), as happy customers have a higher possibility of returning for additional purchases and recommending the business to others (Roberts-Lombard & Nyadzayo, 2014:794). Satisfaction is also considered an immediate reflection of the productiveness of a CRM strategy that strives for long-term customer retention, as against a one-time transaction-based satisfaction (Giannakis-Bompolis & Boutsouki 2014:71).

In the mobile telecommunications industry, especially when rivalry is at its peak and the customer base is flooded with options from every other network provider, it is important to figure out the needs of customers so as to improve the relationship and achieve higher profits (Al-Hersh & Saaty, 2014:83; Saroha & Diwan, 2017:16; Santouridis & Veraki, 2017:1124). One way of doing this is by implementing the customer relationship management strategy (refer to Chapter 3, section 3.3.3).

4.4 TRUST

Morgan and Hunt (1994:23) defined 'trust' as the willingness to rely on a partner to whom confidence is entrusted in order to establish and continue a successful relationship. The construction of this definition splits trust into two parts; sociological (willingness) and psychological (confidence). Trust is also known to shape a person's belief and attitude towards another individual or business organisation in an exchange relationship, and provides a fundamental viewpoint for understanding individual consumer behaviour (Sheppard & Sherman 1998:422; Sharafizad & Standing, 2017:275).

Although a generally accepted definition of trust remains beyond reach, there seems to be a general understanding among researchers that trust encompasses many important components. For example, trust exists in situations characterised by uncertainty; trust is an expectation; the degree of trust is directly related to the magnitude of this expectation; the strength of trust is related to confidence in the ability of the trusted individual; trust demands mutuality; and trust is related to good outcomes (Bhattacharya, Devinney & Pillutla, 1998:461-462; Sharafizad & Standing, 2017:275). With the surge of the relational orientation in marketing activities influencing consumer behaviour, trust has become a major factor in cultivating an enduring desire to maintain a long-term relationship (Morgan & Hunt, 1994:34; Yeboah-Asiamah, Narteh & Mahmoud, 2018:179). Trust is thus a mark of assurance of the authenticity and reliability of the two sides of exchange (Rashmi & Krishnakumar, 2015:163) (refer to Chapter 3, section 3.3).

In business, trust is one of the most important determinants of a healthy long-term and reciprocal relationship, as it reduces the perceived risks associated with opportunistic behaviours by exchange partners (So, King, Sparks & Wang, 2016:182; Hafez & Akther, 2017:142). Trust is known to be built on experienced satisfaction (previously explained in Chapter 3, section 3.3).

Therefore, without trust there can not be a durable long-term relationship, exchange of knowledge, consistent interaction to allow creativity, or innovation between customer and business organisation (Sharafizad & Standing, 2017:272). Du Plessis and Roberts-Lombard (2012:62) and Mahmoud et al. (2018:262) reported that both parties equally must perceive that trust is present before a relationship can exist, as this is what will determine commitment to the relationship (refer to Chapter 3, section 3.3.4). Indeed, trust is also essential, particularly for the service industry, owing to the notion of intangibility that represents the service itself (Bojei et al., 2012:975; Raina & Pazir, 2017:51).

Therefore mobile network subscribers will trust the network provider if they are of the opinion that the relationship will consistently yield positive results and a perceived level of credibility (Rashmi & Krishnakumar, 2015:163). Trust reduces a customer's feelings of vulnerability (Al-Hersh & Saaty, 2014:78). Thus the more the mobile network subscriber trusts that a network provider will act in his or her interest, the higher the preference for using their services and also favourably recommending the company's services (Parsa & Sadeghi, 2015:1246; Aslam, Arif, Farhat & Khursheed, 2018:181).

4.5 COMMITMENT

Commitment is defined as an enduring desire to maintain a valued relationship (Morgan & Hunt, 1994:23), or as a psychological attachment to an organisation (Gruen, Summers & Acito, 2000:37). Dwyer, Schurr and Oh (1987:19) suggest that commitment is ''an implicit or explicit pledge of relational continuity between exchange partners that reflects the highest level of relational bond". This implies a higher level of obligation to make a relationship succeed and to make it mutually satisfying and beneficial (Al-Hersh & Saaty, 2014:78).

Generally, customer commitment is typically seen as a dynamic concept derived from sociology (Izogo, 2016:752), organisational behaviour (Kiesler, 1971:30; Bojei et al., 2012:976), and industrial organisation psychology literature (Fullerton, 2014:659). The perception of commitment in sociology is used to examine consumer and organisational behaviour and to define the characteristic modes of specific types of individuals or groups (Al-Hersh & Saaty, 2014:78-79).

Commitment is defined by psychologists as decisions that bind an individual to a behaviour (Kiesler, 1971:30; Fullerton, 2014:659; Al-Hersh & Saaty, 2014:78).

While from a marketing perspective, commitment is defined as an enduring desire to maintain a valued relationship, and means staying in contact with satisfied customers, providing timely and accurate updates on product and service improvements and proactively communicating when there is a distribution issue (Al-Hersh & Saaty, 2014:78). Izogo (2017:22) simply defined it as the desire to maintain a relationship with a particular telecommunications service provider.

Commitment plays a very important role in understanding the strength of customer relationship management theory among exchange partners (previously explained in Chapter 3, section 3.3.3.2), in which exchange partners consider that a continued long-term relationship with one another is essential, has considerable reciprocal gains, and requires significant effort to sustain (O'Donnell et al., 2014:89) (previously explained in Chapter 3, section 3.3.1). Organisations that establish cordial business relationships with customers through regular service and product improvements will also enjoy a high level of customer commitment (Wali et al., 2015:49). On the other hand, Roberts-Lombard and Du Plessis (2012:156) have argued that commitment originates from trust (previously explained in Chapter 3, section 3.3.4).

In the consumer and organisational behaviour literature, commitment has affective, continuance and normative components (Allen & Meyer, 1990:1; Lariviere, Keiningham, Cooil, Aksoy & Malthouse, 2014:76).

4.5.1 Components of commitment

According to Hennig-Thurau, Gwinner and Gremler (2002:232), customer commitment is defined as an exchange partner's willingness to continue an essential long-term relationship. Previous studies in the literature (Allen & Meyer, 1990:1; Shukla, Banerjee & Singh, 2016:324; Van Tonder & Petzer, 2018:952) have explained customer commitment as a dimension that has three components - affective commitment, continuance commitment, and normative commitment - although other scholars have focused on only affective and continuance commitment (Richard & Zhang, 2012:574; Wu, Zhou & Wu, 2012:1762; Izogo, 2015:110, Brown et al., 2019:156).

4.5.1.1 Affective commitment: Is defined as the passionate connection with a business organisation, as it represents a strong logic of personal identification (Mbango, 2018:3). Affective commitment is also defined as an emotional connection to an organisation so that the firmly

committed customer associates with, is engrossed in, and enjoys membership of the organisation (Allen & Meyer, 1990:2; Izogo, 2015:110).

Affective commitment grows through the degree of reciprocity or personal interaction that a customer has with a business, resulting in a higher level of trust and commitment (Gustafsson, Johnson & Roos, 2005:211). The more affectively and intensely a consumer associates with the values and images projected by an organisation or brand, the greater the resistance to change to an alternative provider (Giannakis-Bompolis & Boutsouki 2014:71).

4.5.1.2 Continuance/calculative commitment: Refers to the intention to continue a relationship with an organisation based on the social and economic cost considerations (Halim, 2018:74). It is a continuance/calculative commitment that reflects consumers rational economic-based dependence on a product, and their sense of bonding in remaining with a business organisation, owing to a lack of beneficial alternatives or a cognitive estimation of the costs involved in defecting as a result of perceived high switching costs (Gustafsson et al., 2005:211; Giannakis-Bompolis & Boutsouki, 2014:71).

Continuance commitment is also known as the rational, calculated aspect of commitment. Gilliland and Bello (2002:28) noted that continuance commitment was a state of allegiance to an exchange partner, or was cognitively perceived as recognising the gains that would be lost and the losses that would be suffered if the relationship ended.

Continuance commitment includes a more negative, psychologically dependent motivation that is sufficiently different from affective commitment. Continuance commitment has much to do with switching costs and a lack of alternatives (Allen & Meyer, 1990:1; Izogo, 2015:110). This type of commitment sometimes makes customers feel trapped in a relationship (Thaichon & Quach, 2016:7). These customers may be involved in regular transactions, and may even become loyal customers, but beneficial habits such as referrals are a stretch for them, as they are much more vulnerable to attractive deals from competitors that balance the value of their current service provider's offering (Thaichon & Quach, 2016:7; Valaei & Rezaei, 2016:1668).

4.5.1.3 Normative commitment: Refer to a sense of moral responsibility or obligation a customer has towards an organisation (Allen & Meyer, 1990:1; Shukla et al., 2016:324). Normative commitment is defined as a form of association that relies on distinctive norms recognised over time, where customers expect that they ought to stay with the company (Bansal, Irving & Taylor, 2004:236; Valaei & Rezaei, 2016:1668). Normative commitment

encourages customers to have a sense of responsibility to remain in the relationship because they ought to (Shukla et al., 2016:324); but it leaves a customer with little or no choice, as their effects are temporary at best (Saha, 2016:136). Normative commitment can be increased when an individual feels indebted to the organisation, or because they have invested time and resources in the organisation (Tarigan & Ariani, 2015:23).

4.6 LOW SWITCHING COSTS

Porter (1980:10) suggested that switching costs are a one-time cost, as opposed to the ongoing costs associated with using a product or provider once a repeat-purchase relationship has been established. Burnham, Frels and Mahajan (2003:110) define switching costs as the one-time cost and lost benefits associated with the process of switching from one provider to another. Switching costs also refers to all the factors that constitute a significant barrier and make it costly for customers to move to alternative service providers (Willys, 2018:1025). Ramadania et al. (2018:1921) explained that there are three types of switching costs:

- procedural switching costs, which primarily involve the loss of time and effort;
- financial switching costs, involving the loss of financially quantifiable resources; and
- relational switching costs, involving psychological or emotional discomfort owing to the loss of identity and the breaking of bonds (Burnham et al., 2003:112; Blut, Evanschitzky, Backhaus, Rudd & Marck, 2016:11; Willys, 2018:1025).

Kim et al. (2004:149) divided switching costs into loss cost, adaptation cost, and move-in cost.

- Loss cost refers to the perception of loss in social status or performance when cancelling a service contract with an existing network provider;
- adaptation cost refers to the perceived cost of adaptation, such as search cost and learning cost; and
- move-in cost refers to the economic cost involved in switching to a new network provider, such as the purchase of a new device and the subscriber fee.

In their different studies, the above authors proved that all three forms of switching costs affect the decisions of customers to stick with their current service provider. Burnham et al. (2003:110) clarify that, while switching costs may be correlated with the switching process, switching costs are not necessarily incurred immediately. Switching costs is an important factor used in market competition reviews, firms' price approaches, and consumer well-being (Park & Koo, 2016:307).

It has been proven that the mobile telecommunications industry brings one of the biggest economic opportunities for revenue generation and profit growth, and the satisfaction switching connection has generated serious concern for service providers (Quoquab et al., 2018:1093).

Mobile service providers classify mobile network subscribers into two primary business and payment models: prepaid (pay as you go) and contracts (post-paid) (Al-Refaie, Al-Tarawneh & Bata, 2018:393). Both rely on contracts: customers select usage contracts based on the predicted use of voice call services or data, or a combination of both, and the differences between them depend entirely on the terms of the agreement. There is no formal lock-in with the prepaid model via a contract that is signed for an agreed period of time (Malhotra & Malhotra, 2013:14).

Prepaid consumers have the privilege and discretion to continue or to opt out of a subscription at any given time. Flexibility is the differentiator and attraction of these mobile service contracts for consumers, although customers in the contract mobile service model receive more benefits than customers in the prepaid scheme (Tesfom, Birch & Culver, 2016:155). As service providers cunningly force customers into unfair contractual commitments, customers feel an immense power imbalance, as the provider takes away the option of walking away if the service is unsatisfactory (Malhotra & Malhotra, 2013:15).

The feeling of helplessness in a customer business relationship can trigger serious customer grievances (Malhotra & Malhotra, 2013:15). Depending solely on this strategy is detrimental, because subscribers only stick with the network provider to prevent the costs of breaking the contract and not necessarily out of their own free will. This is particularly so if customers are dissatisfied, resulting in negative repercussions for the network providers, such as spread of negative word-of-mouth reviews that can damage a firm's reputation and brand image (Roberts-Lombard & Petzer, 2018:428).

Switching costs in the Nigerian telecommunications sector are very low (Izogo, 2017:20); customers can thus move from one service provider to another if they are not satisfied with the service they receive. The advent of mobile number portability has also made switching easier, as subscribers do not have to go through the turmoil of informing their contacts that they have switched network providers.

Consumers consider the shift in overall satisfaction before breaking any current relationships, according to cost models in customer behaviour (Quoquab et al., 2018:1093). The existence of switching costs may mean, for example, that some relatively loyal customers are secretly

disappointed, but do not defect because of high switching costs (Thaichon & Quach, 2016:8). Thus the cost of switching regulates the link between satisfaction and loyalty (Willys, 2018:1027). When switching costs do not apply, customers are usually willing to experiment with other providers even though they are satisfied with their current network provider.

Switching customer barriers are actually one of the most critical issues affecting market competitiveness in the mobile services industry, given that when customers can freely migrate from one mobile network provider to another, there is going to be a constant struggle to attract new customers (Calvo-Porral et al., 2017:717). Besides, expectation disconfirmation theory may also explain the relationship between customer satisfaction and intention to switch (explained previously in Chapter 3, section 3.3.6). Telecommunication firms therefore continuously have to embrace a marketing strategy that is customer-focused to be able to anticipate the needs and wants of subscribers and to keep them satisfied at all times (refer to Chapter 3, section 3.3.3.2).

The next section discusses the relationship link between satisfaction, trust, commitment and switching costs.

4.7 THE RELATIONSHIP LINK BETWEEN SATISFACTION, TRUST, COMMITMENT, AND LOW SWITCHING COSTS

Customer satisfaction is one of the ultimate aims of business organisations, and is believed to lead to loyalty. However, some studies (Picón et al., 2014:750; Oghojafor et al., 2014:74, Izogo, 2015:108; Ogungbade, 2015:275; Kaur & Soch, 2018:365) have argued that customer satisfaction alone is not enough to attain customer loyalty, and that customer satisfaction often works through mediators even though it is an important factor. Empirical research from the literature review has supported this claim: satisfaction, low switching, trust, and commitment are outcomes of implementing CRM (Ibrahim, Hamid, Babiker & Ali, 2015:261; Shafei & Tabaa, 2016:350), making these factors precursors of loyalty (refer to Chapter 3, section 3.3).

Satisfied customers will remain in a trusting relationships with their network service provider because the network provider has consistently met their expectations, and they can confidently rely on the network service provider not to disappoint them (Mahmoud et al., 2018:262). The presence of trust will prompt and encourage subscribers to be committed to this exchange relationship, as they perceive that a relationship with their network service provider is mutually beneficial because of the rewards and services they enjoy (Morgan & Hunt, 1994:24; Goodman & Togna, 2014:38; Balaji, 2015:21; Clark et al., 2017:45). Mobile network subscribers who are in

a satisfying, trusting, and committed relationship with their service provider will not consider switching to alternatives, because they trust the network provider to keep them constantly at the centre of the company focus by churning out more innovative services.

However, if the mobile network service provider consistently fails to meet the needs and wants of its committed subscribers, they will seek out alternatives and switch to competitors (since switching costs are low in the Nigerian mobile telecommunications sector) who can meet their expectations. It is noteworthy that high switching costs can deter customers from opting for the extra benefits that they could obtain from competitors, even when they are dissatisfied. This marketing strategy has been frowned on because of its negative repercussions for the network providers, such as the spread of negative word-of-mouth reviews that can damage a firm's reputation and brand image (Roberts-Lombard & Petzer, 2018:428). Thus for loyalty to exist in the telecommunications sector customers must be satisfied before trust and commitment can be shown (Youcef et al., 2015:3; Mahmoud et al., 2018:262; Rather et al., 2019:204).

Previous studies have found a positive and significant relationship between customer satisfaction and trust (Madjid et al., 2013:59; Youcef et al., 2015:5; Minta, 2018:29; Van Tonder & Petzer, 2018:965). Some studies have also found a positive and significant relationship between customer satisfaction and commitment (Youcef et al., 2015:5; Van Tonder & Petzer, 2018:965; Rather et al., 2019:209), and a positive and significant relationship between customer satisfaction and low switching costs (Edward & Sahadev, 2011:339; Willys, 2018:1035; Garga et al., 2019:8; Wong et al., 2019:8). Based on the results of these studies, the researcher proposed the following three hypotheses:

H6: There is a direct and positive relationship between customer satisfaction and trust in the Nigerian mobile telecommunications industry

H7: There is a direct and positive relationship between customer satisfaction and commitment in the Nigerian mobile telecommunications industry

H8: There is a direct and positive relationship between customer satisfaction and low switching costs in the Nigerian mobile telecommunications industry

4.8 CUSTOMER LOYALTY

Customer loyalty as a term is rooted in consumer behaviour theory, and can be expressed by consumers to products, services, or activities (Hafez & Akther, 2017:142). Consumer loyalty is undeniably the secret to identifying customers' decisions to stay in an exchange relationship with a business enterprise (Russo et al., 2016:894; Revilla-Camacho et al., 2017:1040).

Customer loyalty is described as a deeply held commitment to repurchase or patronise a preferred product or service consistently in the future, despite situational influences and marketing efforts or factors urging them to switch (Oliver, 1997:392; Afridi et al., 2018:217; Yaqub et al., 2019:65).

Pan, Sheng, and Xie (2012:151) also explained customer loyalty as being the strength of a customer's dispositional connection to a brand (or service provider) with the intention to regularly buy the brand (or patronise the service provider) in the future.

Kandampully, Zhang, and Bilgihan (2015:402) further believe that, given the customer's transforming position, where the utmost importance is given to customer participation, customer loyalty should include concepts such as value co-creation and emotional engagement (Van Tonder, 2016:291).

Research has shown that loyal customers are greatly desired outcome and are a growing concern for every business organisation; and the mobile telecommunications industry is not excluded (Rashmi & Krishnakumar, 2015:159; Ofori et al., 2018:583; Inegbedion & Obadiaru, 2019:583). For all businesses pursuing long-term profitability and sustainability, customer loyalty has become a significant goal (Inegbedion & Obadiaru, 2019:583).

Customer loyalty at times has been theorised as a customer's repeat purchase behaviour (Chen & Wang, 2016:348; Yilmaz & Ari, 2017:72). Several researchers have argued that, in addition to this behavioural perspective, customer loyalty should be measured from an attitudinal perspective (Yoo & Bai, 2013:167; Chou, Lu & Chang, 2014; Chang & Thai, 2016, Van Tonder, 2016:291; Yang & Chao, 2017:685).

Some researchers have therefore adopted both perspectives on customer loyalty, defining it as the attitudinal and behavioural tendency to remain with a service provider over all others owing to the services it provides, its performance, and positive referrals (Debnath et al., 2016:307).

More precisely, Yoo and Bai (2013:167) define customer loyalty as “a customer’s repeat visitation or repeat purchase behaviour while including the emotional commitment or expression of a favourable attitude toward the service provider”.

Although a specific definition of customer loyalty has not been agreed on, it seems that most researchers accept that the concept has both a behavioural and an attitudinal component (Pan et al., 2012:156; Van Tonder, 2016:291).

4.8.1 Types of customer loyalty

Most previous research states that loyalty has three aspects: behavioural, attitudinal, and composite or integrated loyalty (a combination of behavioural and attitudinal loyalty) (Zhang, Fu, Cai & Lu, 2014:583; Sharawneh, 2020:2).

4.8.1.2 Behavioural loyalty: Refers to the strong commitment of customers to purchase the product or service despite the availability of alternatives in the market (Priyo, Mohamad & Adetunji, 2019:655). This means that, for different reasons such as, convenience or price, a customer is considered loyal on the basis of their repeated buying behaviour (Morgan & Govender, 2017b:1; Saini & Singh, 2020:206). Sungirirai, Chiguvi and Sungirirai (2017:1817) define it as the outward conscious actions or conduct presented by a customer when making a decision to purchase from or subscribe to a service provider. What the consumer does is also entirely reliant on behavioural loyalty (Dick & Basu, 1994:101; Eresia-Eke, Nyamweda & Chikoore, 2019:292). It evaluates customer loyalty on the basis of static results such as actual usage, repeat purchase, length, wallet share, purchase frequency, market share proportion, and word-of-mouth recommendations (Jones, 1996:11; Raab, Berezan, Krishen & Tanford, 2016:139). Therefore, behavioural loyalty is critical for business because it means that customers are buying from or patronising the service; and without buying there is no revenue (Al-Dmour & Sweidan, 2016:520; Saini & Singh, 2020:206). However, consumers can easily turn to a beneficial alternative in the event of a bad or better deal (Sungirirai et al., 2017:1817). The consumer may not have any loyalty motives in this case, but is loyalty-dependent on ease, duress, or unfavourable circumstances (Sungirirai et al., 2017:1817).

4.8.1.2 Attitudinal loyalty: It is defined as the customer loyalty developed from an emotional commitment, psychological involvement, favouritism, trust, and a sense of goodwill towards a particular product or service (Kim et al., 2004:147; Raab et al., 2016:139; Morgan & Govender,

2017b:1). Attitudinal loyalty reflects the likelihood that a customer's attachment would lead to the voluntary and continuous patronage of a service provider, positive word-of-mouth engagements, and as a medium of referral to other interested customers (Oliver, 1999:35; Kim et al., 2004:147; Yoo & Bai, 2013:167; Kandampully et al., 2015:381; Izogo, 2015:109; Afridi et al., 2018:217).

Customer loyalty embraces the ability of attitudinal loyalty to recommend the brand to others and commitment to the business, evidenced by a resistance to switching to a competitor (Magatef & Tomalieh, 2015:79; Kumari & Patyal, 2017:116; Inegbedion & Obadiaru, 2019:583). The commonality in the positions of the authors mentioned here is that they all accept that there is some emotional or mental connection to attitudinal customer loyalty, which ultimately affects consumer behaviour (Sungirirai et al., 2017:1816). This kind of connection to a mobile network provider would mean that the customer will always subscribe to it, even if the service or product offered is not the best among the alternatives (Sungirirai et al., 2017:1816). Attitudinal loyalty thus represents the notion that loyalty is a state of mind (Dick & Basu, 1994:101), or how the customer thinks and behaves (Tweneboah-Koduah & Farley, 2016:251). Therefore, strong attitudinal loyalty makes customers more resistant to attempts by other service providers to get them to switch, and more resistant to counter-persuasion and to searching for alternatives (Al-Dmour & Sweidan, 2016:520). Attitudinal loyalty can thus be seen as the unconscious choices a customer makes about repurchasing a product or service (Sungirirai et al., 2017:1816). The unconscious aspect means that, without noticing, the customer constantly chooses the service provider (Sungirirai et al., 2017:1816).

Also, for a customer to step up the loyalty ladder and attain a truly loyal position, there must be some behavioural and attitudinal characteristics that the customer exhibits in order to achieve this milestone (Sungirirai et al., 2017:1817).

Since loyalty is a multi-faceted concept in service research, this study followed prior studies (Kim et al., 2004:148; Yoo & Bai, 2013:167; Chou, Lu & Chang, 2014; Chang & Thai, 2016; Van Tonder, 2016:291; Palamidovska-Sterjadovska & Ciunova-Shuleska, 2017:202; Yang & Chao, 2017:685) that adopted both behavioural and attitudinal elements to remedy the shortcomings of the separate approaches, because the behavioural concept of loyalty is too restrictive, and may be affected by some situational factors that affect the decision of a customer to use the same mobile telecommunications service provider (Dikcius et al., 2019:95).

The next section explains the relationship link between customer satisfaction, trust, commitment, and switching costs, and how they lead to customer loyalty.

4.9 THE RELATIONSHIP LINK BETWEEN SATISFACTION, TRUST, COMMITMENT, AND LOW SWITCHING COSTS, TO CUSTOMER LOYALTY

Customer satisfaction is not just a crucial factor that is required in building relationships with customers, but is also a key driver of exceptional performance and customer loyalty (Alnsour, Tayeh & Alzyadat, 2014:211; Soh et al., 2015:215). There are many advantages for a company with a high level of customer satisfaction: it prevents customer churn, reduces price sensitivity for customers, reduces the costs of failed marketing and new customer creation, reduces operating costs owing to higher customer numbers, improves advertising efficiency, and strengthens their business reputation (Kim et al., 2004:149; Rahman, 2014:77; Ofori et al., 2018:587). This is in line with the assumptions of social exchange theory (refer to Chapter 3, section 3.3.1).

However, Oghojafor et al. (2014:74) posit in their research that, besides satisfaction, trust is another major determinant of customer loyalty in the Nigerian telecommunications industry. A customer who trusts a mobile network provider, that has continually met expectations will be encouraged to show loyalty to that mobile network provider voluntarily (Budur, 2018:242). This makes it an important predictor of customer loyalty. Negi and Ketema (2013:111) have also postulated that trust is the principal reason for commitment and the establishment of a strong relationship between an organisation and its customers. When a customer senses the desire and commitment by its mobile network provider to continue a relationship by seeking innovative ways to meet their needs, that customer will choose to be loyal (Negi & Ketema, 2013:112; Chakiso, 2015:59).

Shukla et al. (2016:324) explains that commitment comprises of affective, continuance and normative components (refer to section 4.5.1). These components are motivated by different reasons, and they all have relatively stable attitudes and beliefs about consumer–business relationships (Allen & Meyer, 1990:1; Richard & Zhang, 2012:574; Izogo, 2015:110). However, all components of commitment are also positively related to customer loyalty (Richard & Zhang, 2012:574; Wu et al, 2012:1762; Lariviere et al, 2014:76; Izogo, 2015:110).

The essence of telecommunications services in this study requires that the components affective, continuance, and normative commitment - be included in the evaluation of commitment. Therefore, instead of calculating commitment as a construct consisting of different

components, it is calculated as a hybrid construct containing both affective, continuance and normative elements.

It's also noteworthy that customers who are committed will not think of switching, and their loyalty will remain with their mobile service provider (Putit & Abdullah, 2019:23).

Empirical results have indicated a direct and significant relationship between customer satisfaction and customer loyalty (Mahmoud et al., 2018; Aslam, Arif, Farhat & Khursheed, 2018:179; Ting et al., 2020:248; Jamshidi & Rousta, 2021:167). Some studies have also found a positive and significant relationship between trust and customer loyalty (Madjid et al., 2013:59; Youcef et al., 2015:3; Ting et al., 2020:248), and a positive and significant relationship between commitment and customer loyalty (Rizwan et al., 2014:383; Youcef et al., 2015:5; Chakiso, 2015:59; Mahmoud et al., 2018:269; Rather et al., 2019:209). Previous research has also found a positive and significant relationship between low switching costs and customer loyalty (Picón et al., 2014:747; Makwana et al., 2014:91-92; Shafei & Tabaa, 2016:350; Ramadania et al., 2018:1923; Kaur & Soch, 2018:365). Based on the results of these studies, the researcher proposed the following four hypotheses:

H9: There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry

H10: There is a direct and positive relationship between trust and customer loyalty in the Nigerian mobile telecommunications industry

H11: There is a direct and positive relationship between commitment and customer loyalty in the Nigerian mobile telecommunications industry

H12: There is a direct and positive relationship between low switching costs and customer loyalty in the Nigerian mobile telecommunications industry

The next section outlines the conceptual framework of all the constructs and hypotheses explained above.

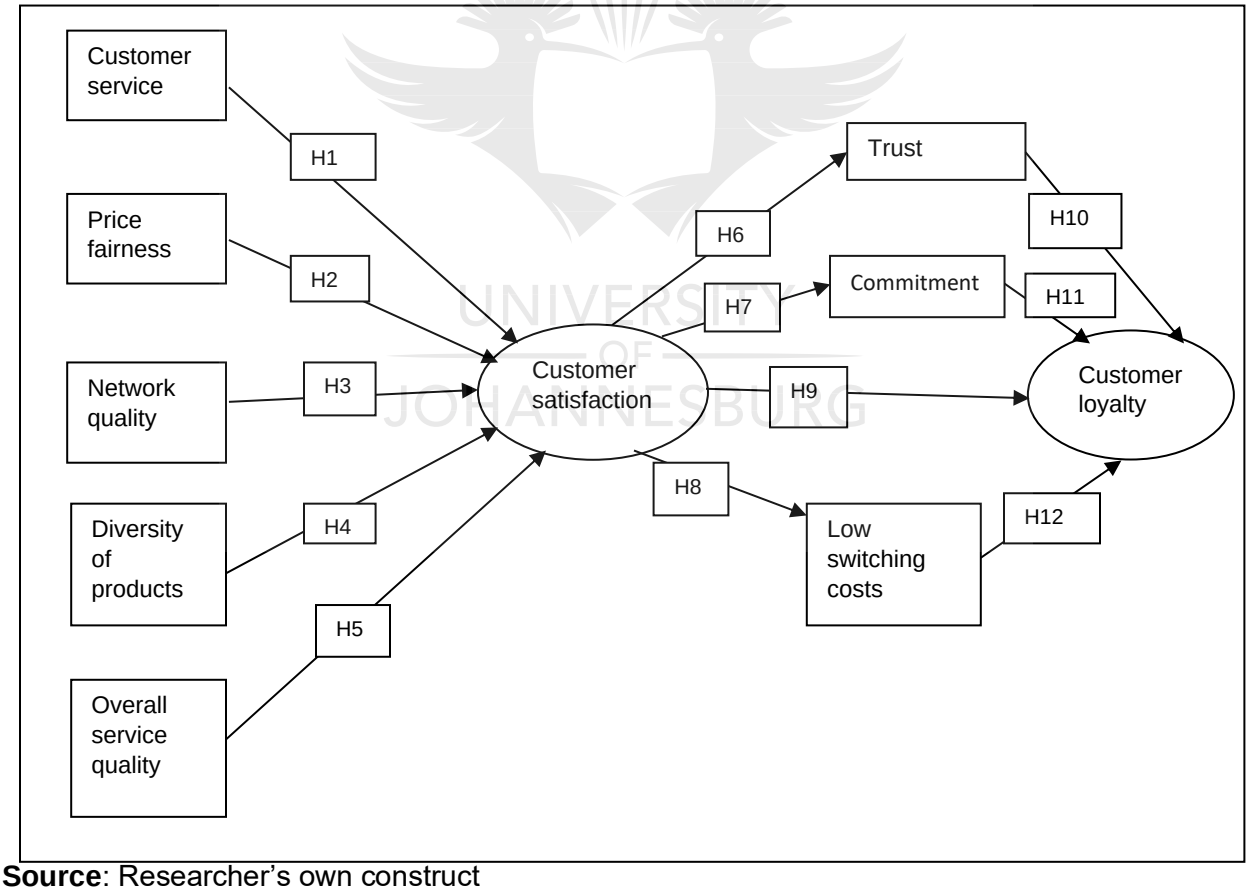
4.10 CONCEPTUAL FRAMEWORK AND HYPOTHESES

Customer satisfaction and loyalty are of critical importance in the mobile services industry as discussed in the previous sections of this chapter; and therefore it is vital to examine the factors that influence them in the Nigerian telecommunications industry. Figure 4.1 displays a

conceptual framework for understanding why and how customers stay satisfied with and loyal to a mobile service provider through CRM implementation. The model describes how to keep customers satisfied through customer service, price fairness, network quality, diversity of products, and overall service quality, with trust, commitment, and switching costs as mediators of customer loyalty.

After conducting the literature review, the researcher created a conceptual framework that is empirically supported by studies carried out by other researchers. This conceptual framework, illustrated in Figure 4.1, measures the impact of customer relationship management on customer satisfaction and loyalty in the mobile telecommunications industry of Nigeria.

Figure 4. 1: A conceptual framework of factors that influence customer satisfaction and loyalty through the concept of CRM in the mobile telecommunications industry in Nigeria



Source: Researcher's own construct

4.11 CONCLUSION

From empirical studies, there are numerous CRM factors that influence customer satisfaction and loyalty, but this study singled out the most relevant and comprehensive ones (customer service, price fairness, network quality, diversity of products, and overall service quality). The relationship between all the variables, and how the theories in Chapter 3 support them, was also clarified.

The conceptual model closes this chapter by showing a framework of the relationship between all the variables and hypotheses. Based on the literature discussed in this chapter, the next chapter discusses the research methodology and the design developed to attain the objectives of the study.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

Marketing research is the systematic collection, analysis, and interpretation of information about all marketing problems using recognised scientific methods to provide information that marketing management can use in the decision-making process (Burns, Veeck & Bush, 2017:37). Wiid and Diggines (2015:1) are of the view that there is much information available, but that this does not automatically indicate relevance or solve specific marketing problems. The alarming rate at which customers are switching between mobile telecommunications providers in Nigeria, and showing their dissatisfaction and disloyalty, has become worrisome to the industry, and has prompted the need to seek precise and valid marketing information from these customers (Izogo, 2016:746). Marketing research thus offers customers the opportunity to convey their opinions and perceptions, which, when considered influence decision-making (Wiid & Diggines, 2015:2). Therefore researchers in the twenty-first century will need to broaden their capabilities and skills in order to design, conduct, and interpret a research process that deliberately shows the researcher's intentional but justified choices that address the marketing problem at hand (Craig & Douglas, 2001:83; Burns et al., 2017:34).

In the contemporary competitive marketing environment, businesses and organisations are embracing marketing research in order not only to know the wants and needs of their customers, but also to retain and establish long-term mutually satisfying relationships with them by adopting strategies that can anticipate unprecedented changes in the business environment (Zikmund & Babin, 2010:3; Burns et al., 2017:36). The growth in this trend is prompted by the ability of marketing research to provide in-depth knowledge for management during decision-making, as it makes it easier for collected data to be transformed into beneficial marketing information (Wiid & Diggines, 2015:1). Therefore, for an organisation to be able to practise marketing effectively, it must make decisions that concern it and plan accordingly. To arrive at these decisions, organisations must be privy to quality information that will enable them to identify and adopt an effective strategy that is all-inclusive (it depicts a current situation, diagnoses the cause and effect in a given situation, and predicts the outcomes), and offers competitive advantage (McDaniel & Gates, 2013:4; Burns et al., 2017:34). This can be done by adopting a research methodology that

accommodates to different forms of belief, and a marketing research process that is well laid out (Craig & Douglas, 2001:83).

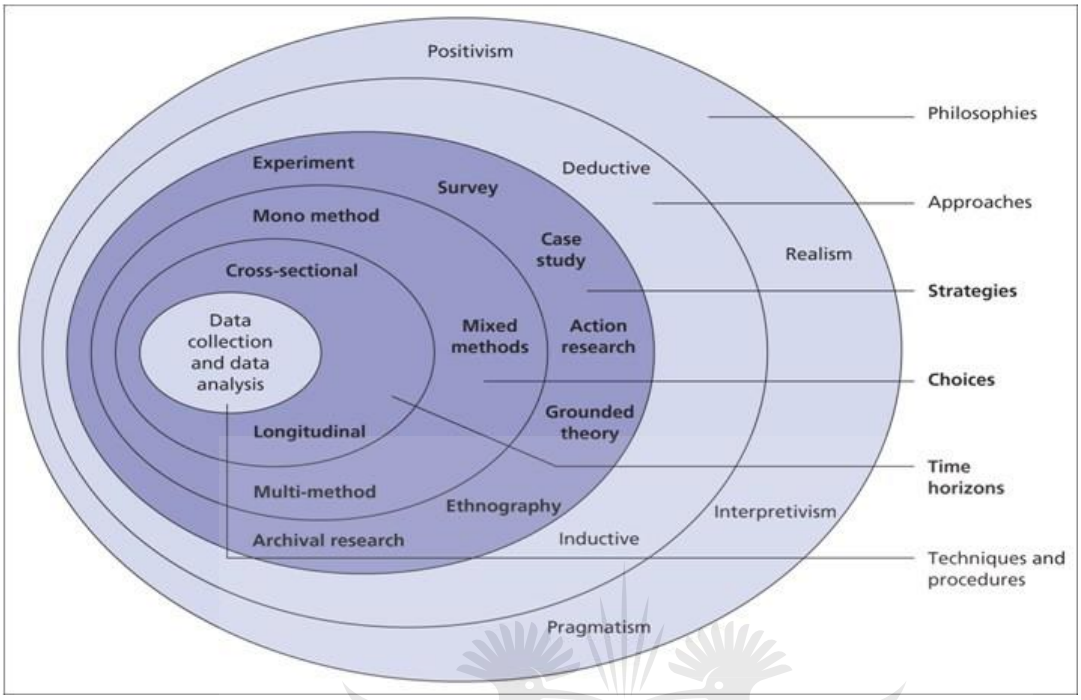
This chapter explains the research methodology, which encompasses the research philosophy, research approach, and methodological choice, which in turn set the course for an extensive eleven-step marketing research process adapted from Wiid and Diggines (2015:41) (refer to Figure 5.2). The final part of this chapter discusses the ethical considerations followed by the researcher.

5.2 RESEARCH METHODOLOGY

A research methodology is a comprehensive research strategy that includes theoretical and philosophical assumptions and, scientific methods, and outlines how the researcher intends to gain insights in answering the research questions and objectives within a validated framework (Giacomini, 2010:129; Saunders et al., 2016:163; Melnikovas, 2018:33). The 'Research Onion' of Saunders et al. (2016) is used below to illustrate the key stages in developing the research methodology adopted in this study. The research onion was chosen to guide the research methodology aspect of this study because of its credibility and its ability to make the theoretical part clearer for the reader and the researcher to follow.

The next section will explore the research philosophy that lies at the core of the study.

Figure 5. 1: The research onion



Source: Adapted from Saunders et al. (2016:124)

5.2.1 Research philosophy

A research philosophy is used to corroborate the standpoint from which a researcher views the universe, and as a guideline for interpreting the research findings (Burns et al., 2017:36). However, different researchers have debated that individual research philosophy can only be adopted once the research paradigm (i.e., the main aspects of the research philosophies or assumptions) has been established (Saunders et al., 2016:127; Ragab & Arisha, 2018:2); a 'research paradigm' being defined as a commonly agreed belief or philosophical framework that guides how scientific research should be carried out and problems be addressed (Collis & Hussey, 2014:43). As reported by Saunders et al. (2016:124), these assumptions endorse the selected research strategy and methods. There are three main separate belief systems or assumptions of research philosophies: axiology (concerned with the values, beliefs, and ethics of the researcher in the research process), ontology (accepts the assumption that realities and perceptions differ among individuals), and epistemology (considers different ways of approaching a research process) (Saunders et al., 2016:127; Melnikovas, 2018:33; Ragab & Arisha, 2018:2-3). This study adopted the epistemological approach.

- **Epistemology**

This is the paradigm that relates to what we accept as valid knowledge, legitimate sources of knowledge, how this knowledge is communicated to others, and the limits of the knowledge in a discipline that can be gained from different types of inquiry and alternative methods of research (Antwi & Hamza, 2015:219; Bryman & Bell, 2015:26; Saunders et al., 2016:127; Melnikovas, 2018:33). Epistemological reasoning can be viewed in relation to the question of whether the social world can and should be studied, based on similar procedures and, principles, and ethos, to those of the natural sciences (Bryman & Bell, 2015:13). Epistemology considers that alternative approaches to research can all be considered valid, ranging from numerical (quantitative) to textual and visual (qualitative) evidence, from facts to interpretations, including narratives, stories, and even fictional accounts (Antwi & Hamza, 2015:219; Saunders et al., 2016:127; Eisend & Kuss, 2019:9). For this reason, different researchers in their studies of business, marketing, and management are oriented towards diverse epistemologies (Saunders et al., 2016:127). **Thus this study follows the epistemological paradigm, as the researcher has adopted the principles and procedures of the natural sciences (the positivist philosophy), which encourage theory testing (the deductive approach) and hypotheses validation through numerical data analysis (the quantitative method) to describe (descriptive research) and predict consumer behaviour (Wiid & Diggines, 2015:65; Saunders et al., 2016:144; Eisend & Kuss, 2019:13).**

According to Saunders et al. (2016:135), there are five main philosophical approaches to research:

- ***Critical realism:*** This philosophy focuses on explaining what we see and the experiences we encounter, with regard to the underlying structures of reality that shape observable events (Saunders et al., 2016:138; Eisend & Kuss, 2019:69).
- ***Pragmatism:*** This philosophy proposes that there are several ways to understand how the world works and ways to conduct research, that the entire picture can never be understood from only a single point of view, and that different realities can exist. (Saunders et al., 2016:144; Ragab & Arisha, 2018:5).
- ***Postmodernism:*** This philosophy emphasises power relationships and the role of language, and seeks to question acknowledged ways of thinking and give voice to other views that have been marginalised (Saunders et al., 2016:141).
- **Interpretivism*:*** This philosophy sees the world as inter-subjective, interpreted, constructed and experienced by people when interacting with each other and with widespread social systems (Antwi & Hamza, 2015:219; Saunders et al., 2016:138; Ragab

& Arisha, 2018:3). Unlike the positivist philosophy, researchers adopting the interpretivist philosophy are naturalistic, as they refer to real-world circumstances as they actually unfold, and therefore findings cannot be generalised to situations or populations because this philosophy argues that the world is open to different interpretations (Antwi & Hamza, 2015:219; Dudovskiy, 2016; Carroll, 2018:35; Wahane, 2019:25). It collects data using qualitative methods such as interviews, in-depth investigations, focus group discussions, and observations (Wiid & Diggines, 2015:94).

- ***Positivism:*** This philosophy ensures that the principles and methods of science are applied to the study of human events and human behaviour, so that law-like generalisations can be produced by using existing theories to help formulate hypotheses (Saunders et al., 2016:135; Brennen, 2017:9; Kuleva, 2018:4; Wahane, 2019:24). Positivists thus believe that true knowledge can be obtained through observation and be described from an objective viewpoint in the search for regularities and causal relationships between variables through the application of inferential statistics (O'niel & Koekemoer, 2016:4; Rahi, 2017:1). Adika (2015:68) and Rahman (2017:106) agree with this view, stating that the researcher's views or bias cannot influence the collected data, because person and reality are separate. Positivism is also noted to embrace a very structured research method, to enable it to be easily repeated for large samples and to ensure precision and objectivity (Antwi & Hamza, 2015:220; Saunders et al., 2016:136). Apart from its sampling advantages, its data analysis usually takes less time, as it uses statistical software such as SPSS because, it is typically deductive (Rahman, 2017:106). Wiid and Diggines (2015:95) argue that these points make it easy to analyse and measure responses.

Research philosophy used for this study: This research adopted a positivist philosophy, which is embedded in the epistemological assumption (Wiid & Diggines, 2015:65; Saunders et al., 2016:144). A research that adopts a positivist philosophy typically employs a quantitative method, which is guided by a scientific approach to confirm hypotheses against large-scale samples (400 subscribers aged from 18 to 65 who patronise the top four mobile network providers in Nigeria) by collecting data (through a questionnaire with predetermined responses) that is specific and precise, and allows the research to be generalised from sample to population (Wiid & Diggines, 2015:95; Antwi & Hamza, 2015:219). All of the characteristics stated above are similar to and 'in sync' with this study, as it focused on describing the relationship between variables and predicting human behaviour (factors influencing customer satisfaction and loyalty in the Nigerian

telecommunications industry) (refer to Chapter 4, section 4.2) by testing existing theories (refer to Chapter 3, section 3.3), which combines deductive logic with precise empirical description.

The next layer of the research onion is the research approach.

5.2.2 Research approach

One of the main purposes of this study was to verify theories for research that can anticipate reality. A theory is a research principle that is standardised and used to explain the relationship between two or more variables and concepts, and can be developed through the use of a deductive or an inductive approach (Saunders et al., 2016:144; Rahi, 2017:1; Eisend & Kuss, 2019:19). The two main contrasting approaches to theory reasoning are inductive and deductive.

This study follows the deductive approach, which is more positivist oriented when considered epistemologically, and is based on conclusive logic from a set of premises proceeding from the general to the particular (Saunders et al., 2016:144; Eisend & Kuss, 2019:14). Unlike the inductive approach, which starts with observation and data collection and then moves to description and analysis in order to generate a new theory, the deductive approach mainly aims at testing a theory, which means that the research strategy originates from the existing literature or a literature review, and its findings are deduced to be only either true or false (Adika, 2015:67; Saunders et al., 2016:146; Rahi, 2017:1; Melnikovas, 2018:34; Eisend & Kuss, 2019:24).

The deductive approach is the dominant research approach in the natural sciences, compared to the inductive approach, which is dominant in the social sciences (Saunders et al., 2016:147; Carroll, 2018:36; Kuleva, 2018:5). An important characteristic of the deductive approach is its ability to describe or explain causal relationships between concepts and variables (Ragab & Arisha, 2018:5; Eisend & Kuss, 2019:23). This method allows the researcher to collect data from large samples, while the inductive approach favours the use of small samples (Saunders et al., 2016:146; Melnikovas, 2018:40; Wahane, 2019:26; Eisend & Kuss, 2019:53).

Research approach used in this research: This study followed the deductive approach method, since the researcher formulated hypotheses (refer to Chapter 1, section 2.3) in an attempt to test various theories (as shown in Chapter 3, section 3.3). The existing theories enable predicted outcomes formed around two important variables of cause and effect that describe the relationship between the customer relationship management variables of satisfaction, trust, commitment, low switching costs and customer loyalty (Hiller, 2016:102; Saunders et al., 2016:146; Ragab & Arisha, 2018:5). The deductive approach adopted in this study also supports

the choice to use quantitative data, whose outcomes are measured numerically from predetermined responses (a questionnaire) using statistical methods to facilitate replication (Payne & Payne, 2004:180; Burns & Bush, 2014:146; Creswell, 2014:4). Note that here the researcher is simply an objective observer and has no control over the responses (Wiid & Diggines, 2015:96).

The next section discusses in detail the methodological choices.

5.2.3 Methodological choices

Appropriate methodological choices justify further research designs and instruments, which is why it is essential to select methods that are suitable for the study (Saunders et al., 2016:167). In business, marketing, and management research studies, there are two well-known research choices: mono methods and multiple methods. Mono methods are single data collection methods, and can only be either quantitative or qualitative, while multiple methods (as the name suggest) can be a mixture of multi-data collection within each method (or a mix of both), which can run simultaneously or successively (Burns et al., 2017:144; Rahi, 2017:1; Wahane, 2019:26). When the data collection techniques and analytical procedures for both methods are employed, it is called a mixed method (Saunders et al., 2016:169). According to Burns and Bush (2014:74), before a research design is adopted the researcher needs to determine whether qualitative or quantitative data is to be used (Burns & Bush, 2014:74).

- **Quantitative and qualitative research**

A quantitative research data collection method aims to identify the level of a problem or the existing relationships between variables in a representative sample of the population through precise statistical, mathematical, or computational techniques in a structured or pre-made manner (Zikmund & Babin, 2010:94; Barnham, 2015:838; Carroll, 2018:37; Ragab & Arisha, 2018:7). Unlike qualitative research, which adopts a subjective approach in order to interpret data non-numerically, and uses open-ended questions in the process of answering a research problem through personal contact (Tolley, Ulin, Mack, Robinson & Succop, 2016:24; Rahi, 2017:1), quantitative research applies reconstructed logic, and takes a linear research route by providing formal questions and pre-made answers to respondents through a validated data collection instrument (survey-questionnaire) (Choy, 2014:100; Wiid & Diggines, 2015:65; Nardi, 2018:22). Choy (2014:101) and Mayer (2015:57) highlights that qualitative research is disadvantaged by factors such as its requirement that interviewers are skillful, the lack of an objectively verifiable

result, its uncertainty, its category process, and the time-consuming and intensive nature of interviewing respondents.

Rahman (2017:106) explains that quantitative research emphasises on those areas of social or human behaviour that can be numerically quantified and patterned to produce reliable data. The data for quantitative research is collected within a short time frame, and is administered objectively and systematically, which prevents the researcher from having any influence over what is being studied (Zikmund & Babin, 2010:94; Choy, 2014:104). Lastly, the analysis of the numerical data is conducted using statistical procedures, often employing software such as SPSS, R, or Stata, that generate quick and cost-effective results (Queirós, Faria & Almeida, 2017:370; Raithatha, 2017:29; Kuleva, 2018:5).

Methodological choice used for this research: This study therefore adopted a mono quantitative method, because the objective of this study was to test theories (refer to Chapter 3, section 3.3) and confirm hypotheses that the researcher had generated by explaining and measuring possible links and relationships between adopted or specific variables (refer to Chapter 4, section 4.10) (Hair et al., 2013:78; Burns et al., 2017:144). This approach was also chosen because a quantitative method specifically allowed the researcher to examine and predict the perception and relationship intention of respondents towards the factors influencing customer satisfaction and loyalty in the Nigerian mobile telecommunications industry through a survey strategy and Internet questionnaire (Wiid & Diggines, 2015:65). It encourages large and representative sample collection (through non-probability sampling) through which the results gotten are generalised and are considered a comprehensive view held across the population within a specific time frame (Queirós et al., 2017:370; Ragab & Arisha, 2018:8). It is also known to be grounded in the positivist paradigm and deductive logic, and is used to describe tangible numerical data (Choy, 2014:104; Rahi, 2017:1; Melnikovas, 2018:40).

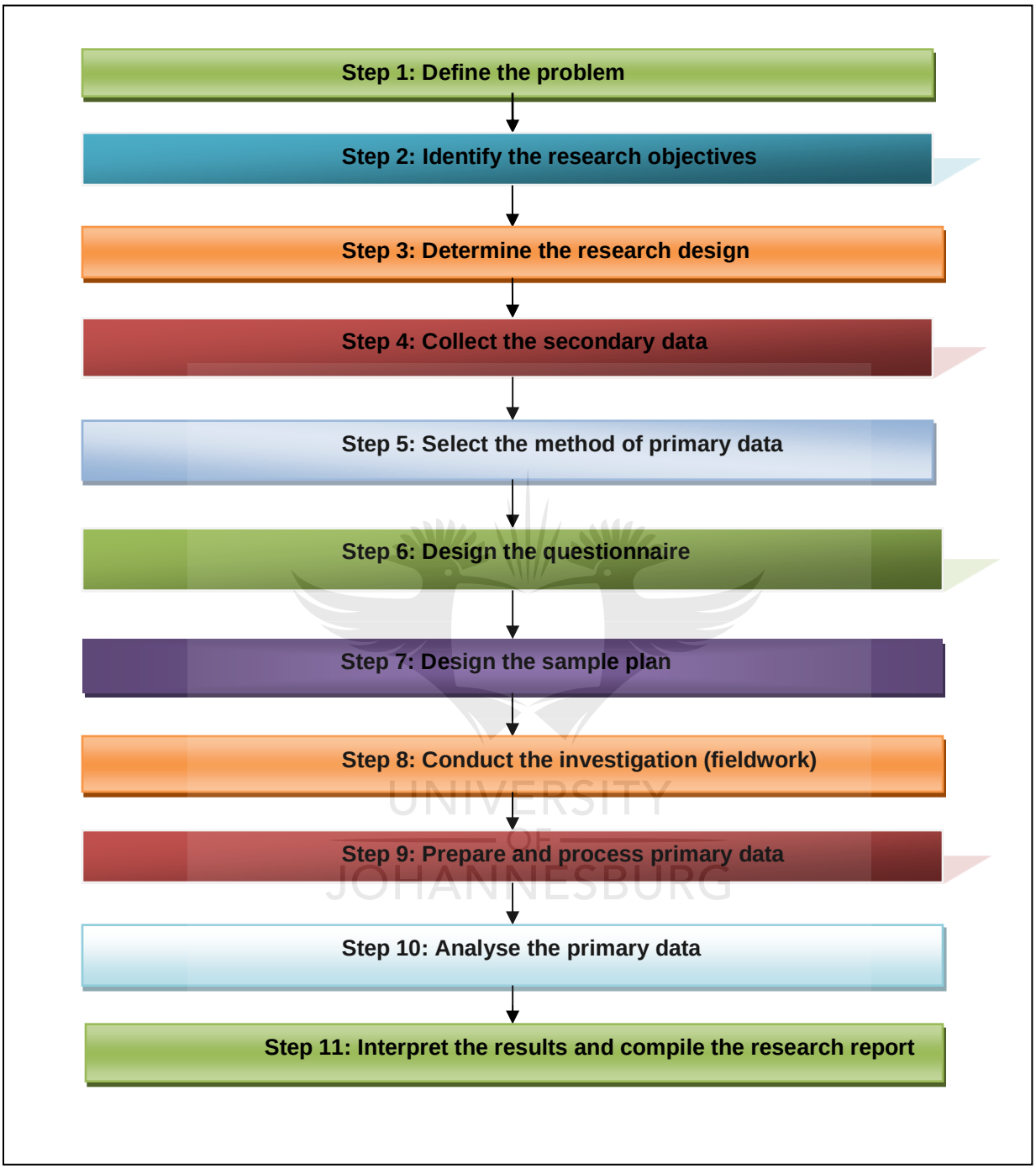
When quantitative research is used, the research problem is made clear, and the researcher is certain about the information that needs to be collected (Hair, Wolfinbarger, Bush & Ortinau, 2013:77). Once this has been established, the marketing research process to meet and resolve this information need must be designed (Moodley, 2008:76). Hair et al. (2013:36) posit that the nature of the research problem, the specific information requirements, and the research objectives will determine the most suitable research design to be adopted.

After establishing the research methodology, the next step was to begin the marketing research process.

5.3 MARKETING RESEARCH PROCESS

Hair et al. (2013:27) refer to the marketing research process as a methodical approach to collecting, analysing, interpreting, and transforming data to assist in decision-making. Wiid and Diggines (2015:36) argue that marketing research should not take place casually, but must follow a logical and interdependent sequence of steps in order to ensure that the identified problem is solved. Various authors suggest different steps in the marketing research process (Burns et al., 2017:69). For this study, the marketing research process outlined by Wiid and Diggines (2015:41) (refer to Figure 5.2) was used, as it can be considered the most comprehensive research process in the marketing literature. The different steps in the research process, illustrated in Figure 5.2, are discussed next.

Figure 5. 2: The research process



Source: Adapted from Wiid and Diggines (2015:41)

Figure 5.2 illustrates the eleven steps that were followed in this research. Steps one and two were based on defining the problem statement and the research objectives as discussed in Chapter 1 (refer to sections 1.3 and 1.4). Steps three and four will be discussed in order to determine what type of research design was required to address the research problem,

objectives, and hypotheses discussed in Chapter 1. Steps five, six, seven, eight, and nine consider the method of primary data collection, the design of the questionnaire, the design of the sample plan, conducting the investigation (fieldwork), and the preparation and processing of the primary data. Steps ten and eleven will be broadly discussed in Chapters 6 and 7 respectively.

The next section focuses on the first step in the research process: define the problem.

5.3.1 Define the problem

Chapter 1 (section 1.3 -repeated for ease of reference) emphasised that consumers are in search of a telecommunications provider that can offer good network quality, a variety of products, fair pricing, and access to satisfactory customer service without sacrificing overall service quality (Izogo, 2016:761), all of which creates the opportunity to develop long-term relationships with them. Owing to the fierce competition in the Nigerian telecommunications market (Ogungbade, 2015:270), many firms are struggling to retain their market share and to keep customers satisfied and loyal. Their poor marketing strategies and philosophies have led to a low incidence of customer loyalty and a high churn rate in the sector (Oyatoye et al., 2015b:10; Oluwafemi & Adebiyi, 2018:102). Inadequate customer service, irregular prices, poor network quality, limited product packages and poor overall service quality have resulted in a lack of trust and commitment, and high switching behaviour among the subscribers of the diverse networks, mainly owing to dissatisfaction (Bakare & Fetuga, 2017:85; Nwakanma et al., 2018:4; Mahmoud et al., 2018:262). These service conditions have become a major concern to the telecommunications service providers, as it has become difficult to keep customers satisfied and to build loyalty and long-term relationships with them.

A review of the available literature showed that not much empirical research to date has focused on the factors that influence customer satisfaction and loyalty while the mobile telecommunications sector in Nigeria aims to develop relationships with its customers. The few studies carried out in Nigeria have largely excluded the telecommunications sector, with only Toyese (2014) undertaking a condensed study that evaluated CRM in the sector and its consequential effect on customer loyalty from an employee perspective. In Toyese's (2014) study, the primary data was collected using a structured questionnaire, with a sample size of 140 respondents from MTN, Glo, Airtel and Etisalat (now called 9mobile). The findings revealed that customer retention and competitive advantages were major benefits that were accruable to the industry. Among the strategies employed by the players in this industry to facilitate these

findings were promotional activities and quick service delivery. The field evidently lacks empirical research on the main factors influencing customer satisfaction i.e., through relationship building factors mediated by trust, commitment, and low switching costs, all of which lead to customer loyalty. This may be because CRM and its overarching emphasis on building relationships with customers is a business strategy that telecommunications firms in Nigeria are still trying to grasp (Tauni, Kahn, Durrani & Aslam, 2014:55). This leaves room for more empirical studies on relationship-building factors and their influence on satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the Nigerian telecommunications sector. This study sought to fill this gap.

The next step in the research process was to identify the research objectives.

5.3.2 Identify the research objectives

Wiid and Diggines (2013:48) and Burns et al. (2017:80) note that research objectives highlight the aims of the research and what the researcher hopes or anticipates to achieve by solving the research problem defined in step one of the research process. The research objectives are divided into a primary objective, which is a comprehensive statement of the focus of the study, and secondary objectives, which are the particular points of the research topic that the researcher wants to investigate (Wiid & Diggines, 2013:48).

Primary objective

- As established in Chapter 1 (section 1.4.1), the primary objective of the study was **to examine the factors that influence customer satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria**.

For the primary objective to be actualised, **the secondary objectives in Chapter 1 (section 1.4.2)** were proposed by the researcher to give insight into the research problem. From the secondary objectives, different **hypotheses and a framework were formulated in Chapter 1, sections 1.6.2 and 1.7 respectively,** to guide the researcher in establishing the scope of the study. Each of the secondary objectives will therefore be discussed in more detail with the specific results and recommendations in Chapters 6 and 7 respectively.

The researcher employed various research designs and strategies to ensure the collection of the most appropriate and relevant information in order to achieve the research objectives and to validate the formulated hypotheses.

5.3.3 Determine the research design

The research design is considered the blueprint of the research process to achieve the research objectives (Burns & Bush, 2014:74). According to Wiid and Diggines (2015:42), there are three major types of research design: causal (or explanatory) research, exploratory research, and descriptive research.

- **Causal (or explanatory) research:** Explanatory research focuses on a problem or a situation in order to explain the causal relationships between the variables under investigation (Burns et al., 2017:102; Raithatha, 2017:29; Ragab & Arisha, 2018:6). Saunders et al. (2016:176) agreed that explanatory research seeks explanatory answers to research questions that begin with or include 'why' or 'how, instead of simply describing the phenomena being studied.
- **Exploratory research:** This type of research is used to seek new insights or to gain information on an issue, area, topic, or phenomenon where few or no earlier studies have been carried out or submitted to which researchers can refer or on which they can rely to predict an outcome (Burns et al., 2017:95; Raithatha, 2017:29). Exploratory research is informally structured, uses open-ended questions and is good for gaining background information, as it encourages flexibility and adaptability in the research (Burns et al., 2017:95).
- **Descriptive research:** Descriptive research, which describes various aspects of the research is seen as one step ahead of exploratory research (Burns & Bush, 2014:74). In terms of descriptive research, the researcher attempts to gain an accurate profile of the persons, situations or events, the phenomenon, or the problem in a systematic manner (Burns et al., 2017:99; Ragab & Arisha, 2018:6). A descriptive research design focuses on finding solutions to the questions, what, who, when, where, and how; a descriptive study cannot therefore conclusively answer the question 'Why?' (McDaniel & Gates, 2013:66; Raithatha, 2017:29). Nardi (2018:10) point out that, if a research project uses description, then it will probably be associated with deductive reasoning.

Research design used for this research: The present study adopted a descriptive research design because it can systematically describe, identify, and explain the relationship between the customer relationship management variables - customer satisfaction, trust, commitment, low switching costs, and loyalty - and accurately portray the behaviour of consumers or exchange situations (Saunders et al., 2016:175). It was also adopted for this study because it aligns with a

deductive and quantitative method of a large sample collection using a survey and questionnaire technique for generalised, reliable, and valid data (Hair et al., 2013:36; Saunders et al., 2016:181). Descriptive research gives the researcher room to ascertain the specific demographic variables of respondents, and to estimate how many respondents share similar perceptions from the questionnaire statements (Lacobucci & Churchill, 2010:84). Another major reason why descriptive research was adopted for this study was because the research problem was clearly understood (as shown in section 5.3.1) (Hair et al., 2013:77). The aforementioned are the main advantages that descriptive design has over findings associated with exploratory or causal designs (Hair et al., 2013:36).

5.3.3.1 Research strategy

According to Rahi (2017:1), a research strategy is how a researcher intends to answer the defined research question and meet the research objectives. Saunders et al. (2016:124) argued that there are numerous research strategies that can be used in research. They identified action research, case study, experiment, ethnography, survey, and grounded theory. Of these, action research, ethnography, grounded theory, and narrative theory are exclusively connected with qualitative research (Melnikovas, 2018:34; Ragab & Arisha, 2018:8). Saunders et al. (2016:178) noted three research strategies for a quantitative study: experiments, case studies, and surveys. As established earlier (refer to section 5.2.3), this study adopted a quantitative research method: and so only quantitative methods are compared below in Table 5.1.

Table 5. 1: Comparing quantitative study-related research strategies

Research strategy	Philosophical stand	Suitability for the research
Experiments	Positivism/realism/ value-free	Experiment seeks to determine whether a specific treatment influences an outcome (Creswell, 2014:42). Creswell (2014:42) explained that the researcher evaluates this by providing a precise treatment to one group and concealing it from the other, and then determines how both groups scored on an outcome in a controlled environment.
Case study	Intrepretivism/ realism or idealism/value-laden	Case study research may be quantitative or qualitative in nature. A case study is an in-depth inquiry into a topic or phenomenon (a person, an organisation, a change process, an association, an event, etc.) in its real-life setting (Yin, 2014:43; Saunders et al., 2016:184). A case study strategy creates awareness from intensive and in-depth research interviews and documentary analysis, leading to the generation of theory (Ponelis, 2015:537; Saunders et al., 2016:184).
Surveys	Positivism/realism/ value-free	A Survey is a way to garner information or standardised data on the characteristics, actions, or opinions of a large group of people (directly referred to as a 'population sample') who are studied to make general inferences about them (Queirós et al., 2017:381). It therefore leans towards exploratory and descriptive research. A survey involves questionnaires and in-depth interviews to allow easy comparison (Saunders et al., 2016:181). The reliability of a survey's data depends on the survey's structure and the accuracy of the answers provided by the respondents (Queirós et al., 2017:381). A survey is cost-and time-effective (Queirós et al., 2017:381). It is also commonly used with a deductive research approach (Saunders et al., 2016:181).

Research strategy used for this research: From the quantitative research strategy table above, a survey is the most relevant method for this research because it supports the positivist methodology and the quantitative techniques of data collection (Internet questionnaires) (Collis & Hussey, 2013:68). This allows for the valid and reliable garnering of mobile subscribers' perceptions of the factors that influence customer satisfaction and loyalty in the Nigerian telecommunications industry (Saunders et al., 2016:181). The survey strategy was also deemed appropriate in this study because it employs a deductive approach to collect anonymous information (which is kept confidential) that is relevant to the objectives of the research in order to validate or disprove a theory (Saunders et al., 2016:181; Rahi, 2017:2).

After the adoption of a research strategy, the time horizon needed to conduct the research is determined.

5.3.3.2 Time horizon

The time horizon defines the chosen time frame for conducting the research and its completion. The major time horizons for research may be longitudinal or cross-sectional (Saunders et al., 2016:200). Longitudinal studies involve repeated and extensive data collection over an extended period of time, as researchers study change and development to come up with more robust conclusions (Nardi, 2018:128). Inversely, cross-sectional studies are designed to gather data just once from any given sample; they study contemporary issues and a particular phenomenon at a specific time (Wiid & Diggines, 2015:67; Saunders et al., 2016:200). Cross-sectional studies also adopt the survey strategy, in which the sample elements are a representation of the target population (Wiid & Diggines, 2015:68). It is also cost-and time-effective (Saunders et al., 2016:200).

Time horizon used for this research: This study adopted the cross-sectional time horizon because this was a descriptive survey research that attempted to predict consumer behaviour in the Nigerian mobile telecommunications industry at a given point in time (Wiid & Diggines, 2015:68; Nardi, 2018:128). This means that the final objective of this study involved a framework that could be easily resolved within a stipulated time. Thus the secondary and primary data were collected within a certain time, and results that could be generalised to the target population were generated within the total research period, as this study was an academic dissertation (Nardi, 2018:128).

The next section will discuss the data collection sources and, thereafter, the instrument adopted to collect the data (a questionnaire).

5.3.4 Collect the secondary data

Secondary data is data that has been previously collected and published, and that has been made accessible, available, and cost-effective for other researchers for reasons other than the research project in question (Malhotra, 2007:106; Wiid & Diggines, 2013:74; Burns et al., 2017:116). Burns and Bush (2014:74) advise that secondary data should be collected first during the research process, as it provides a background to the research problem and an overview of the literature.

Secondary data can be categorized as coming from internal or external sources (Wiid & Diggines, 2015:85). 'Internal sources' refers to data collected by an organisation in the course of its day-to-day activities (Wiid & Diggines, 2015:86). For the purposes of this study, the internal sources of the secondary data were the websites of MTN, GLO, AIRTEL and 9MOBILE that reported their respective profits and investments (refer to Chapter 2, section 2.6). 'External sources', on the other hand, refers to data found in sources that are outside the organisation (Wiid & Diggines, 2015:86). External sources are separated into syndicate data, pooled data, and other published sources (Wiid & Diggines, 2015:86); however, only pooled and other published sources were used by the researcher during the process of secondary data collection for this study. 'Pooled data' refers to data made available by interested organisations that provide standardised data that is reallocated to participating organisations (Wiid & Diggines, 2015:86). The pooled data sources used in this study were industry sources such as the Nigeria Communications Commission (refer to Chapter 2, section 2.6, Figure 2.2). Other published sources adopted for the purpose of this study were academic journals, books, theses and dissertations, periodicals, newspapers and trade literature reports (Wiid & Diggines, 2015:86). Therefore an extensive literature, along with previous studies highlighting the different factors responsible for influencing or determining customer satisfaction in telecommunications was consulted (refer to Chapter 4, section 4.2, Table 4.1).

The industry focus, theoretical framework, literature review, and methodology were formed by researching secondary data sources before considering any primary research methods. This information is presented in Chapters 2, 3, and 4 of this study. These secondary sources thus supported the conceptualisation, validity, and reliability of the research (Saunders et al., 2016:338). They also gave the researcher insightful information of significance to the marketing problem, and laid a foundation for the study's focus (Wiid & Diggines, 2015:86).

During the secondary research process, the researcher noted a gap in the literature (refer to Chapter 1, section 1.3). On this basis, it was evident that primary research was needed to investigate the research problem further (Wiid & Diggines, 2015:93).

5.3.5 Select the method of primary data

Primary data is data that is collected directly by a researcher from scratch for a precise purpose, and is used to solve a particular research problem, as it gives meaningful insight into the behaviour and perceptions of the sample population (Malhotra, 2010:100; Burns & Bush, 2014:74). Saunders et al. (2016:439) recommend that, when opting for a data collection method, the researcher reviews all possible data collection methods and selects the most suitable method for the research questions and objectives. Primary data can be collected through qualitative or quantitative research methods (Wiid & Diggines, 2015:94). As established earlier (refer to section 5.2.3), this study adopted a quantitative research method. Primary data collection methods for quantitative study include observation, experiments, and surveys (questionnaires) (Wiid & Diggines, 2015:94).

In this study, the survey (a questionnaire) was used because it enabled the collection of precise data that was required to answer the research questions and to achieve its objectives (Saunders et al., 2016:439). McDaniel and Gates (2013:336) define a 'questionnaire' as an arranged group of questions that are used in data collection and that are intended to solve a research problem. This is intended to enable each respondent to answer the same set of questions in a predetermined order (De Vaus, 2014:204). Using a questionnaire also allows for greater control over the variables of interest. Saunders et al. (2016:449) emphasised that the questions in the questionnaire be worded such that respondents can easily understand them in the way intended by the researcher. The questionnaire is also one of the most widely adopted data collection methods to obtain a structured set of data that can be generalised (De Vaus, 2014:204; Saunders et al., 2016:437).

Method of primary data used for this research: The questionnaire was beneficial to this study since it is an efficient, convenient, fast, and cost-effective method of collecting responses from a large sample for quantitative and descriptive research (Burns et al., 2017:178). Furthermore, the questionnaire was chosen because the study adopted the survey approach and sought to identify relationships between variables - which a questionnaire makes possible through its design. The questionnaire was also chosen as the researcher intended to guide the responses of the respondents in relation to the variables (customer service, price fairness, network quality, diversity

of products, overall service quality, customer satisfaction, trust, commitment, low switching costs and customer loyalty) that were adopted for measurement in this study.

A questionnaire can be a face-to-face questionnaire, interviewer-completed, telephone-administered, posted or mailed administered, self-completed or completed on the Internet (Saunders et al., 2016:440).

- **Face-to-face questionnaires:** This refers to questionnaires for which the interviewer has to have face-to-face contact with the respondents to ask certain questions on a specific topic (Wiid & Diggines, 2015:121; Saunders et al., 2016:440).
- **Interviewer-completed questionnaire:** This refers to questionnaires where the interviewer records or completes the questionnaire on the basis of each interviewee's answers (Saunders et al., 2016:440).
- **Telephone-administered questionnaire:** This refers to questionnaires undertaken by telephone, the answers to which can be recorded manually or directly on a computer (Wiid & Diggines, 2015:124; Saunders et al., 2016:440; Nardi, 2018:76).
- **Post or mail administered questionnaire:** These are questionnaires that are posted to respondents who return them via post or mail after completion (Saunders et al., 2016:440).
- **Self-completed questionnaire:** This refers to questionnaires completed by respondents, and that are often referred to as 'surveys' (Nardi, 2018:73).
- **Internet questionnaire:** This refers to self-completed questionnaires administered to participants via the Internet. Here, respondents access the questionnaire either in their web browser via a hyperlink (web-based questionnaire) or directly by means of a QR (quick response) code scanned into their mobile device (mobile questionnaire) (Saunders et al., 2016:440; Nardi, 2018:74).

Type of questionnaire used for this research: After an extensive review of the literature and consideration of the global COVID-19 pandemic, it was accepted by the researcher that an Internet questionnaire delivered via a hyperlink (web questionnaire) would best fit and facilitate the achieving of the objectives established for this study. This method was advantageous to this research, as responses could be obtained almost instantaneously from participants (Wiid & Diggines, 2015:134; Saunders et al., 2016:442). It also had a higher possibility of completion and a higher return rate without requiring the researcher to have special technical skills (Wiid & Diggines, 2015:134). Bias on the part of the researcher was also eliminated, and it was cost-effective (Maronick, 2009:20). Internet questionnaires delivered via a hyperlink have been found

to make data entry and analysis easier (Wiid & Diggines, 2015:132). Wiid and Diggines (2015:35) also noted that respondents can be kept anonymous.

The significance of the Internet as a new medium for administering survey research can no longer be questioned (Maronick, 2009:20); and, as noted by ESOMAR (2008), online research continues to increase rapidly, and is presently the fastest growing method that researchers adopt. In the light of the global COVID-19 pandemic, the Internet web-based questionnaire, which does not require contact between the researcher and the respondent, is more likely to be the most efficient type of questionnaire.

Once the appropriate survey method has been chosen, a well-phrased and well-designed questionnaire needs to be developed to enable the researcher obtain the necessary information sought from respondents. The next section provides an in-depth outline of the questionnaire design.

5.3.6 Design the questionnaire

The essence of questionnaire design is to provide a structured layout of the questions the researcher wants participants to answer, so as to facilitate accurate data collection and to improve the relevance and precision of the collated result to solve the original marketing problem (Burns & Bush, 2014:214; Wiid & Diggines, 2015:165). In the opinion of Saunders et al. (2016:449), the internal validity and reliability of the data that is collected and the response rates that are achieved largely depend on how the questions are designed, on the questionnaire's structure, and on the rigour of the pilot testing.

5.3.6.1 Questionnaire's question format

Researchers usually adopt either open-ended (unstructured) or closed-ended (pre-made or structured) questions and responses in questionnaire design (Saunders et al., 2016:452). Open-ended questions permit respondents to provide answers in their own way, while closed questions are well-formulated questions with pre-made responses for respondents to choose from (Nardi, 2018:79).

Questionnaire question format used for this research: This study adopted a closed-ended structured questionnaire, which is usually more economical and quicker and easier to answer (Burns et al., 2017:143). It was also chosen for this study because it would allow the researcher to design the scale options and responses in relation to the research problem, hypotheses, and

research objectives (Burns & Bush, 2014:216). It is also easier to compare and record the data from the responses, as they have been predetermined (Saunders et al., 2016:452).

5.3.6.2 Questionnaire structure

The questionnaire for this study was structured and divided into a covering letter and three sections.

- **Covering letter:** The first part of the questionnaire was the covering letter, which is part of most self-completed Internet questionnaires, and is the first part of the questionnaire that a respondent sees (Saunders et al., 2016:468). The main significance of a covering letter is to provide essential information about the study in order to encourage and motivate respondents to be part of the research (Zikmund & Babin, 2010:169). Here, the respondents will be made aware that the research is purely for academic purposes, that participation is voluntary, and that their anonymity and responses will be safeguarded and kept confidential. The likely time taken to complete the questionnaire and the contact details of the researcher and supervisors for this study were also included. Respondents were encouraged also to complete the questionnaire from their own perspectives. Those who agreed to take part in the research could then proceed to answering the screening questions (Saunders et al., 2016:244). It is worth mentioning that no compensation or incentives were offered to respondents in order to fill out the questionnaire.

  To make the process easy and fast and to collect valid data, two screening questions were added. The first screening question asked the respondents if they had used any of the top four mobile network providers (MTN, GLO, AIRTEL, 9MOBILE) consistently in the previous six months, while the second screening question asked whether the respondent was between the ages of eighteen and sixty-five. If a respondent's answer was "no" to any of the screening questions, they wouldn't be able to complete with the questionnaire. Nevertheless, they were thanked for their willingness to participate.

  The screening questions were included to ensure that potential respondents were the right target sample and were qualified to proceed with the questionnaire, and to ensure that the ethical age standard was observed. The questionnaire design is described in the sections below.

- **Section A:** Measured the general and demographic information of the respondents, using nominal and ordinal scales: their gender and age, how many SIM cards they owned, the name of the primary mobile telecommunications operator they were using, how long they had been with their mobile network provider, on which mobile service they spent more money, and the amount spent on mobile services. The demographic questions were structured in such a way that the respondents' identities were not revealed.

- **Section B:** Measured the customer relationship management variables adopted from an extensive literature review. This section included thirty-three items with which to measure customer expectations. The main focus here was to determine what customers expected from their mobile network provider regarding the five CRM variables (as explored in Chapter 4, section 4.2). As stated in Table 5.2, the items used in measuring the CRM dimensions were adopted from previous studies: customer service (adopted from Jere & Mukupa, 2018:123; Nekmahmud & Rahman, 2018:359; Dey, Al-Karaghouli, Minov, Babu, Ayios, Mahammad & Binsardi, (2020:7); price fairness (adopted from Iyer, Davari & Paswan, 2016:51); network quality (adopted from Jere & Mukupa, 2018:124); diversity of products (Adopted from Matt, Hess & Weiß, 2019:1550; Kundu & Mor, 2017:170); and overall service quality (adopted from Koi-Akrofi, Koi-Akrofi & Welbeck, 2013:90). The respondents were requested to indicate their level of expectation for each item on a five-point Likert scale (refer to section 5.3.6.3). The questions in section B Q8-Q40 were linked to the secondary objective to determine whether customer service, price fairness, network quality, diversity of products and overall service quality lead to customer satisfaction

- **Section C:** Measured respondents' overall level of satisfaction, relationship intentions, and customer loyalty. This section included twenty-seven items with which to measure customer satisfaction, trust, commitment, low switching costs and customer loyalty. The items used in this section were adopted from previous studies: satisfaction (adopted from Gupta & Sahu, 2015:385-386), trust (adopted from Ofori et al., 2018:598), commitment (adopted from Minta, 2018:28), low switching cost (adopted from Palamidovska-Sterjadovska & Ciunova-Shuleska, 2017:205), and customer loyalty (adopted from Rather, 2018:14). The respondents were asked to indicate their level of relationship intention for each item on a five-point Likert scale (refer to section 5.3.6.3).

The questions in section C Q41-Q45 were linked to the secondary objective, to determine whether customer satisfaction leads to trust, commitment, low switching and customer loyalty, while Q46-Q67 were linked to the secondary objective, to examine the relationship between trust, commitment and low switching costs as mediators between customer satisfaction and customer loyalty.

Table 5. 2: Summary of composition of questionnaire

Variables/constructs	Literature	Number of items
Customer service	Jere & Mukupa (2018:123), Nekmahmud & Rahman (2018:359), and Dey et al. (2020:7)	**11**
Price fairness	Iyer et al. (2016:51)	**6**
Network quality	Jere & Mukupa (2018:124)	**5**
Diversity of products	Matt et al. (2019:1550) and Kundu & Mor (2017:170)	**5**
Overall service quality	Koi-Akrofi et al. (2013:90)	**6**
Customer satisfaction	Gupta & Sahu (2015:385-386)	**5**
Trust	Ofori et al. (2018:598)	**6**
Commitment	Minta (2018:28)	**5**
Low switching costs	Palamidovska-Sterjadovska & Ciunova-Shuleska, (2017:205)	**5**
Customer loyalty	Rather, (2018:14)	**6**

Source: Researcher's own table

5.3.6.3 The choice of scale

A Likert scale is a set of statements (items) created to measure a hypothetical situation under study in a scientifically accepted and validated manner (Joshi, Kale, Chandel & Pal, 2015:397; Nardi, 2018:61). The items or variables in the questionnaire were measured on a five-point Likert scale ranging from strongly disagree (1), disagree (2), undecided (or neither agree nor

disagree) (3), agree (4) and strongly agree (5) (Likert 1932:14), that enabled participants to show their level of opinion or perception (Nardi, 2018:61).

The five-point Likert scale was adopted because it is clear, concise, and straight-forward, which helps to avoid ambiguity, as it aids easier understanding and expression (Likert, 1932:45). It is also recognized as bringing a balance of both positive and negative items, which is generally recommended to reduce response-set bias (Willits, Theodori & Luloff, 2016:127). The five-point Likert scale is considered to be user-friendly, and has been found to provide acceptable levels of reliability (Dillman, Smyth & Christian, 2014:159). The feedback from Likert scale statements is easy to code and analyse, as responses are stated in numerical form (Zikmund & Babin, 2010:255). Annexure 3 presents a compilation of the items and scales used in each section of the questionnaire.

5.3.6.4 Pilot or pretesting questionnaire

Before the survey was distributed, a pretest was executed. Pretesting is a method of checking that questions work as intended and are understood by those individuals who are likely to respond to them (Hilton, 2015:1). According to Saunders et al. (2016:473), before administering a questionnaire for the main survey, it should be pre-tested with respondents who are identical to the target sample. This serves the purpose of refining the questionnaire to ensure that respondents do not encounter problems in answering the questions and to accelerate smooth data recording.

Furthermore, it is important in self-completed Internet surveys, as it enables the researcher to evaluate the questions' validity and the likely reliability of the data to be collected, both for individual questions and for scales (Saunders et al., 2016:473). Low levels of reliability and validity can be tested and improved on by making modifications to the questionnaire, which mostly entails reviewing the items in the questionnaire and rewriting or removing ambiguous questions (Watson, 2015:6).

Therefore the current study carried out a pilot study of the questionnaire on 30 respondents who were similar to the sample population before the actual data collection process (Wiid & Diggines, 2015:174). The questionnaire was administered by the researcher via a WhatsApp hyper-link. Respondents' comments and suggestions about the questions' wording, whether the questionnaire was easy to complete, and whether any of the sections were confusing were noted and incorporated to make the questionnaire simpler and easier to understand for every

participant who took part in the final survey (Burns & Bush, 2014:229). The respondents who took part in the pilot study were not included in the final survey.

Once pretesting had been completed, the unclear questions were rephrased, as shown in Table 5.3 below.

Table 5. 3: Changes made to different statements in the questionnaire

SECTION B	
Customer service (CS)	
Original statement	**Final statement**
CS2: I consider quality customer service as one of the most important factors of consideration in the evaluation of a network	I consider customer service as an important factor when evaluating a mobile network provider
CS6: My current mobile network provider is easily accessible through a variety of channels such as shops, call centres, their website etc	My current mobile network provider makes its customer service easily accessible through shops, call centres, their website etc
Price fairness (PF)	
PF3: The overall advantages I receive from my mobile network provider are higher than what I expect	The overall advantages I receive from my mobile network provider are more than what I expected
SECTION C	
Customer satisfaction (CSA)	
CSA1: The services of my mobile network provider completely meets my expectations	My mobile network provider's services completely meet my expectations
CSA2: I am satisfied with the interactions that I have had with the customer service employee of my mobile network provider	I am satisfied with the interactions that I have had with my mobile network provider's customer service agents

5.3.7 Design the sample plan

As stated by Saunders et al. (2016:274), it is important to define the research population clearly. The population is the larger pool from which the sampling frame that meets a set of specifications or criteria are drawn and to which findings can be generalised (Verma, Gautam, Pandey, Mishra & Shukla, 2017:298; Nardi, 2018:116). 'Population' does not refer only to a number of people but can also include the total quantity of the things or cases that are research subjects (Etikan, Musa & Alkassim, 2016:1).

Therefore the populations of mobile phone subscribers in Warri, Delta State, Benin City, Edo State, Nigeria who patronised the top four mobile telecommunications network providers were used for the study. These populations were chosen for this study because they lived in some of the most cosmopolitan areas in the southern region of Nigeria that are also major commercial centres and highly industrialised areas (World Population Review, 2019). A sample frame is a miniature version, proportion, or subset of the population of which it is a part – just like it, only smaller (Verma et al., 2017:298). Data derived from a sample is treated statistically. The sampling units in this study were male and female respondents aged from 18 to 65 who had an active mobile network line (SIM) from at least one of the top four mobile network providers in Nigeria as their primary network, and had consistently subscribed or recharged in the previous six months.

5.3.7.1 Sampling method

According to Saunders et al. (2016:275) two sampling techniques are available: probability or representative sampling and non-probability sampling.

- **Probability sampling**

Probability sampling is associated more with survey and experiment research strategies, in which the researcher has to make statistical presumptions from the collected sample about the characteristics of a population to answer the research question and to meet the objectives (Saunders et al., 2016:276). It is explained more clearly by Etikan et al. (2016:1) as presuming that every participant has an equal chance of being selected from the population. Probability sampling is also known as representative sampling, which is used for known populations (Saunders et al., 2016:276). This method of sampling includes random sampling, stratified random sampling, cluster sampling, and systematic random sampling (Verma et al., 2017:298-299). Probability sampling was therefore not adopted for this study, as the researcher did not

have access to a database, directory, or register containing the mobile numbers of those who would complete the questionnaire (Saunders et al., 2016:277; Wiid & Diggines, 2015:190).

- **Non-probability sampling**

Non-probability sampling is also known as judgemental sampling, and is used for unknown populations. Non-probability sampling is described by Etikan et al. (2016:1) as a sampling technique that involves gathering samples in a process that does not offer every participant or unit in the population an equal chance of being included. With non-probability sampling, the researcher may still be able to generalise about the target population (Saunders et al., 2016:276).

Sampling method used for this research: This study adopted the non-probability sampling method because it aids the collection of a large representative sample in quantitative research (Nardi, 2018:117). The advantage of non-probability sampling is that it is less time-consuming, more cost-effective, and convenient for researchers quickly to assemble a sample for those research studies that do not require focus groups of the population (Wiid & Diggines, 2015:191; Verma et al., 2017:300).

The non-probability sampling methods are convenience, purposive, quota, and snowball sampling (Saunders et al., 2016:298; Nardi, 2018:125). Table 5.4 below summarises these methods.

Table 5. 4: Summary table for non-probability sampling methods

Non-probability method	Description
Convenience	In convenience sampling, the sample is selected primarily on the basis of what the researcher is able to access (Wiid & Diggines, 2015:191). Convenience sampling is also used when where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate, are included for the purpose of the study (Etikan et al., 2016:2).
Purposive	It is also known as judgemental sampling; purposive sampling is a non-probability technique that involves the deliberate and conscious selection of informative participants by the researcher to be representatives of the population in a study (Saunders et al., 2016:301; Verma et al., 2017:300). Participants are selected because they have certain qualities and particular characteristics that are of interest to the researcher (Etikan et al., 2016:2). For example, they have had the experience in which the researchers are interested, or there are certain aspects of their lives in which the researchers are interested. Purposive sampling is very effective when carrying out pilot studies or pre-testing questionnaires (Wiid & Diggines, 2015:192).
Quota	Quota sampling is a non-probability sampling technique in which the assembled sample has the same proportion of individuals as the entire population with respect to known characteristics, traits, or focused phenomena (Saunders et al., 2016:299). In addition to this, the researcher must make sure that the composition of the final sample to be used in the study meets the research's quota criteria. The main reason why researchers choose quota sampling is that it allows them to sample a subgroup that is of great interest to the study, less costly, can be set up very quickly, and is effectively used for large target populations (Saunders et al., 2016:299; Verma et al., 2017:301).
Snowball	Here, a researcher makes contact with a sample element with characteristics that are specifically required, who then serves as an informant in identifying other members of the population who possess similar characteristics or information that is beneficial for the study or interview (Wiid & Diggines, 2015:192; Saunders et al., 2016:303; Nardi, 2018:127). The aforementioned sample elements will then direct the researcher to other sample elements with similar experiences (Saunders et al., 2016:303). Here, participants volunteer to be part of the research rather than being chosen (Saunders et al., 2016:303). This has the potential advantage of drawing on participants' own expertise in developing the sample, as well as expanding the sample beyond contacts known to the researcher in the first stage of their project. Snowball sampling is a useful choice of sampling strategy when the population you are interested in studying is hidden or hard-to-reach (Verma et al., 2017:300).

Non-probability sampling method used for this research: The snowball sampling method was adopted for this study because the questionnaires could not be administered face-to-face owing to the Covid-19 global pandemic, which restricted of human movement and physical contact. The snowball sampling method therefore gave respondents the opportunity to send the questionnaire hyper-link via WhatsApp to other identified respondents whose identity remained anonymous. The researcher had no idea of those who were identified and sent the questionnaire.

5.3.7.2 Sample size

The sample size for the study was determined using Yaro Yamani's (1967:886) statistical method formula, which is expressed as:

$$n = \frac{N}{1+N(e)^2}$$

where 'n' is the sample size, 'N' is the population size (total number of active subscribers), and 'e' is the sample error (0.05). This formula was used to determine the sample size.

The population size obtained from the Nigerian National Bureau of Statistics (2018:20) is 5,333,316 active subscribers in the selected area.

$$n = \frac{5333316}{1+5333316(0.05)^2} = 400$$

Therefore 400 repeat customers (the sample size) who patronised the top four telecommunications mobile service providers in Nigeria would be asked to complete the questionnaires.

This sample size is consistent with similar previous studies conducted by Rizomyliotis et al. (2018:4), Ofori et al. (2018:588), Quoquab et al. (2018) in the mobile telecommunications industry and they suggested a sample size up to 400 as ideal for drawing conclusions. Adika (2015:71) also used a similar sample size of 320 on a study in the Ghanaian mobile telecommunications sector. Therefore, 400 questionnaires were distributed, using the non-probability snowball sampling method to identify both male and female subscribers aged from 18 to 65 whose primary mobile telecommunications provider was one of top four mobile network providers. Table 5.5 below summarises the sampling plan, highlighting the methodological aspects and the phases adopted for this study.

Table 5. 5: Sampling plan highlighting the methodological aspects and phases adopted for this study

Methodological aspect	Phase
Type of research	Quantitative
Research format	Descriptive
Target population	Mobile phone users in Warri, Delta State and Benin City, Edo State, in Nigeria, who patronised one of the top four telecommunications network providers.
Sampling units	Male and female respondents aged from 18 to 65 who had a mobile network line from one of the top four network providers and who had subscribed or recharged in the previous six months
Time	July to August 2020
Sampling size	400 male and female respondents aged from 18 to 65 whose main telecommunications provider was either MTN, GLO, AIRTEL, or 9MOBILE
Sampling technique	Non-probability snowball sampling
Data collection instruments	Questionnaires adapted from previous studies (refer to section 5.3.6.2) and self-completed via a hyper-link on WhatsApp. Google Forms. (2020). *Factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry*. Available from: https://forms.gle/Fv5CQiq1UZMTBE1w5. This method was used as the global COVID-19 pandemic discouraged human contact.
Data analysis	SPSS version 25.0 AMOS was used to analyse data from the questionnaires.

After determining the sample method and size, the researcher checked and limited possible sampling errors that might have occurred during the research process.

5.3.7.3 Possible sampling errors

Burns and Bush (2010:241) define sampling errors as any error or bias that occurs when a sample is used. There are two kinds of sampling error: systematic and random. Systematic sampling errors occur owing to a fault in the design or execution of the sample. Such errors include non-response errors (where the researcher finds it difficult to get responses from the sample) and sample selection errors (where the researcher targeted the wrong sample or an incorrect method of data collection was adopted) (Wiid & Diggines, 2015:216). Random sampling errors are caused by factors that cannot be avoided or controlled (McDaniel & Gates, 2013:387; Zikmund & Babin, 2013:221).

This study avoided sampling errors by ensuring that the sample size of 400 subscribers was large enough to avoid random sampling errors; respondents were encouraged to forward the questionnaire to others; and respondents were requested not to fill and submit questionnaires in a hurry, and were encouraged to read through the covering letter carefully and to proceed with filling the questionnaire at their own convenience.

5.3.8 Conduct the investigation (fieldwork)

Given that this study adopted a web-based questionnaire and the snowball sampling method, respondents who met the criteria of the screening questions were identified and were sent the questionnaire hyper-link on WhatsApp. On completing the survey, they were encouraged to send the link to other identified mobile network subscribers who used any of the top four mobile network service providers in Nigeria (MTN, GLO, AIRTEL and 9MOBILE).

The field of survey research has become much more scientific, and several leading associations have emerged to enhance fundamental industry practices and to safeguard respondents during marketing research. They include ESOMAR (the World Association of Opinion and Marketing Research Professionals). Therefore in the covering letter the respondents were clearly made aware of all their rights during a research process, as ethical conduct must be taken into consideration according to the principles of the ICC/ESOMAR 2016 International Code on Market, Opinion and Social Research and Data Analytics.

The respondents were made aware of what they were also required to do in filling out the questionnaire. An information preamble was provided at the beginning of the questionnaire to assure respondents that their participation was not only voluntary, but also that their anonymity and responses wouldl be kept confidential. They were also provided with the contact details of the researcher and supervisors for the study if clarity were ever needed. The research topic and

the purpose of the study were also made clear. The collection of primary data took place from July to August 2020 (that is, a cross-sectional approach).

5.3.9 Prepare and process primary data

The data analysis procedure gives the researcher an understanding of the data collected, and room to compare the responses from all the respondents and to describe the relationships among the constructs to form conclusions (Burns & Bush, 2014:317). In a bid to carry out a high-quality data analysis, the researcher was guided by a statistician from STATKON (the Statistical Department at the University of Johannesburg). Before processing the responses, the completed questionnaires were sorted, checked and edited for completeness and consistency (Wiid & Diggines, 2015:223). The procedure for preparing and processing the primary data analysis is discussed in the sections blow.

- **Data coding**

Data coding is the procedure of categorising data (Wiid & Diggines, 2015:225). Once the responses and data of respondents have been collected, they are grouped into various categories and coded. McDaniel and Gates (2013:444) explain data coding as the procedure in which the researcher assigns numeric codes to the responses to questions. No open-ended questions were included in the questionnaire, so no post-coding was required (Wiid & Diggines, 2015:226).

- **Data entry**

McDaniel and Gates (2013:144) highlighted in their study that a questionnaire has no value for the researcher until the data has been entered into a statistical programme. After the data collection period, the collected responses were downloaded electronically into an MS Excel spreadsheet (Wiid & Diggines, 2015:232). The researcher was assisted thereafter by STATKON to enter the collected data into SPSS version 25.0 in order to interpret it.

- **Cleaning the data**

Once the coded data had been entered into SPSS, there was some data that needed cleaning (checking for errors or omitted data) and verification so as to maintain quality (Wiid & Diggines, 2015:233). STATKON assisted in this process, and any missing constructs were removed.

- **Storing of raw data**

The preparation process of raw data is only considered complete after it has been entered, verified, cleaned, and labelled (Wiid & Diggines, 2015:235). Then it is ready for analysis. It can

be stored on a memory stick, on a CD-ROM, or in the statistical package format until the researcher is ready to analyse it (Wiid & Diggines, 2015:235).

5.3.10 Analyse the primary data

The primary objective of data analysis is to sustain the research objectives and to arrive at a precise conclusion for the study (Raithatha, 2017:33). Raithatha (2017:33) stated that there are numerous advantages of data analysis in research; however, its capacity to present the researcher with structured findings obtained from the review of various sources, including the survey questionnaire, makes it stand out. Therefore data analysis can be utilised to create a solid basis for making significant decisions in the research. In the current study, the researcher was of the view that the data analysis was one of the most important phases of the study, as it involved analysis of the collected quantitative data.

Since the goal of a questionnaire is to test the hypotheses provided, questions of validity and reliability are important (discussed broadly in section 5.3.10.1 and 5.3.10.2). Therefore validity measurements were provided for content validity, construct validity, and criterion-related validity, while the reliability of scale data was determined using Cronbach's alpha test (a full explanation is given in section 5.3.10.2).

The validity, reliability, and assessment of the study's conceptualised research model are discussed broadly in the next section to give the reader an in-depth understanding.

5.3.10.1 Validity of the study

'Validity' explains how well the collected data precisely covers the area of investigation it ought to cover or measure (Nardi, 2018:64; Eisend & Kuss, 2019:129). A valid questionnaire will enable accurate data that actually measures the concepts of interest to be collected, while one that is reliable will mean that the data is collected consistently (Saunders et al., 2016:449). There are three major types of validity measurement: content validity, construct validity, and criterion-related validity (Saunders et al., 2016:450).

5.3.10.1.1 Content validity

Content validity is the first measure of validity. It looks at the extent to which the measurement instrument (questionnaire) and the scores from the questions ensure sufficient coverage of the investigative questions with respect to the entire concept (Eisend & Kuss, 2019:135). In other words, does the instrument cover the entire domain related to the variable or construct it was designed to measure (Heale & Twycross, 2015:66)? The adoption of content validity can be

seen in section 5.3.6.2, Table 5.2, which summarises the composition of the questionnaire covering all the variables. This study also assessed content validity by adopting scales and scale items from previous studies such as those of Jere and Mukupa (2018:124), Rather (2018:20), and Matt et al. (2019:1550) (refer to section 5.3.6.2, Table 5.2).

A sub-category of content validity is face validity: there is subjective agreement from expert opinion that an instrument measures the intended variable or theory (Heale & Twycross, 2015:66; Nardi, 2018:64). It is frequently used to explain the appearance of validity without empirical testing, which makes it the simplest and least precise method of determining validity (Mohajan, 2017:73). For this study, the researcher consulted with a statistician from STATKON to ensure that the measurements were valid and essential at face value. The pretest of the questionnaire also ensured that some questions in the questionnaire were rephrased (as shown on section 5.3.6.4, Table 5.3) to enable ease of understanding and applicability to the objectives of the study.

5.3.10.1.2 Construct validity

This refers to the degree to which a research instrument (in this case, the questionnaire) measures the intended construct adequately (Heale & Twycross, 2015:66; Nardi, 2018:65). Evidence of construct validity can be seen in section 5.6.3.2 block B and C, which show the connection between the objectives, the questionnaire sections, and the variables, which were all adopted from previous studies.

Construct validity has two components: convergent and discriminant validity. This study implemented both. 'Convergent validity' refers to the degree to which two measures of constructs that theoretically should be related are in fact related (Taherdoost, 2016:31; Eisend & Kuss, 2019:137). Convergent validity is determined when the scores collected with separate instruments measuring the same concept are strongly correlated (Mohajan, 2017:76). Convergent validity was therefore tested using confirmatory factor analysis (CFA) to test the internal consistency and scale reliability of the measuring instrument (Zikmund & Babin, 2010:251).

Confirmatory factor analysis (CFA) is a statistical technique used to verify how well the measured or observed variables represent the latent variables (Aktepe, Ersöz & Toklu, 2015:98; Saroha & Diwan, 2020:664). CFA enables the hypotheses to be tested by the researcher where a relationship exists between observed variables and their underlying latent constructs. The

CFA model is the most commonly used approach, which is built by using the maximum likelihood estimation method in Structural Equation Modelling (SEM) (Aktepe et al., 2015:98).

'Discriminant validity' refers to the degree to which a single construct is different from the other constructs from which it is supposed to differ (Malhotra, 2010:289; Eisend & Kuss, 2019:137). This implies that a factor should not correlate with other factors from which, theoretically, it ought to be different (Zikmund & Babin, 2010:252). To measure discriminant validity, the square root (√) of the AVE must be greater than the Pearson correlations coefficient (r) between the constructs, and the model should not contain a high number of cross-loadings between the variables (Fornell & Larcker, 1981:45-46; Malhotra, 2010:709).

5.3.10.1.3 Criterion-related validity

This measures how well the research instrument (questionnaire) is able accurately to predict the future characteristics of the individuals being measured (McDaniel & Gates, 2013:292; Eisend & Kuss, 2019:136). Heale and Twycross (2015:66) describe it as the extent to which a research instrument is associated with other instruments when measuring similar variables. It deals with the relationship between the scale scores and some specific measurable criterion (Mohajan, 2017:74).

Criterion validity is commonly measured in two ways. The first is predictive validity, which means that the instrument (the scales of the questionnaire) should have high forecast correlations with future criteria (Heale & Twycross, 2015:66). The second is concurrent validity, which refers to the extent to which the results of a particular test or measurement correspond to those of a previously established measurement for the same construct (Taherdoost, 2016:33).

In this study, when measuring section A of the questionnaire, concurrent validity was used to determine how mobile network subscribers felt about their experiences with their current mobile network providers. The researcher then relied on predictive validity in section C of the questionnaire to measure the subscribers' feelings about their current mobile network provider and to predict their behaviour.

5.3.10.2 Reliability of the study

The second measure of quality in a quantitative study is reliability, which is the consistency or accuracy of a measuring instrument (Wiid & Diggines, 2015:249). Reliability is focused on the robustness of the questionnaire and, in particular, on the extent to which it will generate consistent and precise results (free from errors) if used in the same situation but under different

conditions, such as with different samples (Heale & Twycross, 2015:66; Watson, 2015:5; Saunders et al., 2016:451). In the opinion of Burns and Burns (2008:558), Cronbach's alpha is used for scale data to determine whether the items used in the questionnaire measure the same variable. Mohajan (2017:68) notes that reliability measures the consistency, precision, repeatability, and trustworthiness of a study. It is worth noting that 'reliability' does not mean 'validity' (Wiid & Diggines, 2015:249; Nardi, 2018:65).

There are three common approaches to assessing reliability in a questionnaire: test re-test, internal consistency, and alternative form. This study adopted internal consistency, which involves correlating the responses to questions in the questionnaire with each other. Thus it measures the consistency of responses across a sub-group of the questions (Saunders et al., 2016:451).

There are various methods for determining internal consistency; one of the most commonly used is Cronbach's alpha (α) test, which was adopted for this study (Eisend & Kuss, 2019:134). This statistic is usually used to measure the consistency of responses to a set of questions (scale items) that are combined as a scale to measure a particular concept (Saunders et al., 2016:451; Eisend & Kuss, 2019:134). In this test, the average of all correlations in every combination of split-halves is determined. It consists of an alpha coefficient with a value between 0 and 1. Values of 0.7 and higher indicate an acceptable reliability score, that the questions combined in the scale are measuring the same thing; and any coefficient below 0.6 is considered unreliable (Heale & Twycross, 2015:67).

5.3.10.3 Assessment of the study's conceptualised research model

The central statistical analytical technique applied in this research was structural equation modelling (SEM), which is used to examine the structural component of a measurement and to validate a structural model (Hult, Hair, Proksch, Sarstedt, Pinkwart & Ringle, 2018; Mahmoud et al., 2018:265). SEM is a comprehensive statistical multivariate analysis approach used to test and find relationships among observed and latent variables (Hair, Hult, Ringle & Sarstedt, 2017:2; Aktepe et al., 2015:99). The possibility of modelling complex dependencies and latent variables - which is regarded as the main advantage of SEM - prompted its use in this study (Saroha & Diwan, 2020:666).

SEM is the preferred data analysis method today for confirming or rejecting theories by testing hypotheses, particularly when the sample size is large, the data is normally distributed, and - most importantly - the model is correctly specified (Hair et al., 2017:11). The ability of SEM to measure the relationship between constructs through separate multiple measures simultaneously to represent constructs, and to account for the measurement error, distinguishes it from other statistical methods (Hair et al., 2017:12).

SEM is also helpful for showing the mean, standard deviation, variance, and covariance of observed data for the determination of different hypotheses in a theoretical or conceptual model (Shaheen, Ahmad, Waqas, Waheed & Farooq, 2017:133). These features made SEM appealing to the researcher, as it offers unprecedented methodological advantages and a greater understanding of human perceptions, attitudes, and behaviours in different contexts (Shaheen et al., 2017:133). But the major applications of the SEM are confined to the confirmatory testing techniques that show whether or not a certain model has validity (Shaheen et al., 2017:133) (as explained in section 5.3.10.1.2). Thus SEM was deemed appropriate for the current research, as the study intended to investigate the factors that influence customer satisfaction and loyalty, and the dynamics of the relationship between customer satisfaction, trust, commitment, low switching costs and loyalty.

Researchers usually have two options to choose between when adopting SEM: covariance-based SEM (CB-SEM), which uses software such as AMOS, EQS, LISREL, and Mplus; and the partial least squares SEM (PLS-SEM) (Hair, Ringle & Sarstedt, 2011:139).

In the current study, the Statistical Package for Social Sciences (SSPS) version 25.0 and AMOS were adopted to implement SEM.

5.3.10.4 Statistical analysis of the results

SPSS version 25.0 and AMOS were used for the descriptive analysis of the variables, and the output was interpreted in frequencies, percentages, mean scores, and standard deviations. These two programs were deemed suitable because of their programming capabilities, their user-friendly features, and their graphical interface functionalities, which were compatible with the research objectives of this study (Byrne, 2013:4). Factor analysis, which was another of the statistical analyses performed, is discussed briefly below and more fully in the next chapter.

- **Frequency distribution**

Hair et al. (2010:160) describe frequency distribution as the number of times respondents give each variable a certain possible response to a question. The frequency distribution was be used to test for even distribution across intervals in terms of frequency counts, percentages and cumulative percentages (Field, 2013:19).

- **Mean**

A mean is the arithmetic average score of a particular measured variable, and can be regarded as the most common measure of central tendency (Zikmund et al., 2010:415).

- **Standard deviation**

Burns and Bush (2014:321) define standard deviation as the average distance in the distribution of values from the mean, which provides a more accurate reflection of the data.

- **Skewness and kurtosis**

The skewness value is an indication of the symmetry of the distribution, while kurtosis provides information that relates to the peaks of the distribution (Pallant, 2010:57; Wiid & Diggines, 2015:254). Skewness and kurtosis are used to check normality.

- **Factor analysis**

Factor analysis is a statistical technique used to simplify a set of data. Wiid and Diggines (2015:289) explain that factor analysis helps to break down a large number of variables into a smaller number of factors for easier management. Factor analysis has two common techniques used in scale adaptation and development studies: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Eisend & Kuss, 2019:138). An exploratory factor analysis is conducted where there is no knowledge among the items of the scale and to determine underlying latent variables that are all freely estimated (Orcan, 2018:415). Hair et al. (2010:99) explained that the purpose of EFA is to examine the data by relating all measured variables to each factor using a factor loading estimate. When checking whether each individual item loaded onto its desired factor as intended during the EFA process, a Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's test of sphericity were used to ensure that individual scale items were loaded appropriately. The use of KMO also helped the researcher to confirm that the data was satisfactory for factor analysis (Field, 2013:685).

After EFA analysis, a confirmatory factor analysis was carried out to understand the structure of the variables and to reduce the data set to a more manageable size. Confirmatory factor

analysis is used to ensure that the measured variables represent the latent variables (that is, the measured items are relevant to the scale or actually measure the construct) (McDaniel & Gates, 2013:524; Aktepe et al., 2015:98; Eisend & Kuss, 2019:139). This helped the researcher to confirm or reject hypotheses through structural equation modelling (SEM). Confirmatory factor analysis is therefore executed by SEM, which is compatible with this study. This study adopted EFA and CFA processes, as factor analysis during a research process can use both techniques. After SEM has been conducted, the relationship between the mediating effect between satisfaction, trust, commitment, low switching costs and loyalty and their hypotheses were tested and confirmed or rejected. This process was be carried out using the PROCESS version 3.5 add-on for SPSS Model 4.

5.3.11 Interpret the results and compile the research report

The transformation and analysis of unusable or raw data by SPSS version 25.0 gave the researcher valuable information from which recommendations and suggestions could be deduced (Burns & Bush, 2014:316). The research data's findings were then submitted using tables, graphs, and pie charts, strengthened by an explanation and interpretation of the data. Chapter 6 discusses the statistical analysis and the results of the study, while Chapter 7 provides the key recommendations, practical strategies, and conclusions presented to the mobile network service providers in the Nigerian telecommunications industry.

5.4 ETHICAL CONSIDERATIONS IN RESEARCH

'Research ethics' refers to conducting research with due adherence to ethical considerations and to the rights of those who have become part of the research or are affected by it (Burns et al., 2017:59). Therefore it is important to adhere to the basic norms of scientific conduct while carrying out academic research. All marketing and opinion research carried out via the Internet must conform to the rules and spirit of the ICC/ESOMAR International Code on Market, Opinion and Social Research and Data Analytics (ESOMAR Guideline, 1994:439; ICC/ESOMAR, 2016), which this study adopted. The researcher also secured ethical clearance from the University of Johannesburg's college of business and economics research ethics committee and its sub-committees. This study only took place after full permission had been granted by the research ethics committee (2020SCiiS023 approved ethics number).

In order to maintain ethical standards, the researcher strictly considered ethical issues such as avoiding any discrimination or, coercion, protecting the confidential responses and anonymity of participants, respecting their human dignity, informing respondents that no risk (potential harm)

was involved in participating, obeying relevant laws, and assisting respondents with clarification while collecting data for this research (Saunders et al., 2016:245; ICC/ESOMAR, 2016:8). Respondents were also informed of their right to withdraw if they so chose during the process, and reminded them that participation was voluntary (Saunders et al., 2016:245; ICC/ESOMAR, 2016:8).

In a bid to observe these principles of research ethics, the researcher provided clear and sufficient information and assurances on the first page of the web-based questionnaire so as to encourage respondents to fill out the questionnaire (Saunders et al., 2016:244). This meant that participants were duly briefed without any form of coercion before they agreed to take part in the research (Saunders et al., 2016:251). The respondents were made aware of what was required of them in completing the questionnaire. Also, a covering letter was provided at the beginning of the questionnaire, setting out the researcher's and supervisor's details if any clarity were needed, and information about the research topic and the purpose of the study.

In an attempt to avoid incidents of respondents answering the questions in a hurry, the researcher used a hyper-linked web-based questionnaire that was administered via WhatsApp. This gave respondents ample time to fill the questionnaire at their convenience. This provided respondents the time to read the questionnaire carefully before completing it. The researcher also ensured that the demographic questions were structured in a way that guaranteed that the respondents' identities were not disclosed. The respondents were also made aware that the research was purely for academic purposes; thus their anonymity and responses would be safeguarded and not divulged to any third party outside the study.

5.5 CONCLUSION

In this chapter the researcher discussed the methods (adapted from Saunders et al., 2016:124) and marketing research processes (adapted from Wiid & Diggines, 2015:41) adopted for the collection and analysis of the data by providing the necessary justification. In summary, the researcher chose the positivist paradigm, which supports a descriptive research design for conducting research, and required the adoption of the quantitative research method and the deductive research approach. Both primary and secondary data sources were used in the study; the primary data was collected using the self-completed Internet-based questionnaire method. A sample size of 400 respondents were identified, both male and female, aged from 18 to 65, whose main mobile telecommunications provider was among the top four in the Nigerian mobile network industry; and the questionnaire was administered to that sample. The Internet-based

questionnaire method was implemented, along with the adoption of non-probability quota and snowballing sampling techniques. SPSS version 25.0 and AMOS were used to analyse the data from the web-based questionnaires (discussed in Chapter 6). The researcher concluded the chapter by discussing the ethical considerations. In the next chapter, the researcher presents and analyses the results of the data gathered from the web-based questionnaire administered to the respondents.

CHAPTER 6

DATA ANALYSIS AND INTERPRETATION

6.1 INTRODUCTION

The previous chapter focused on the research methodology and research process adopted for this study. The eleven-step marketing research process (adapted from Wiid & Diggines, 2015:41) concludes with the analysis, interpretation, and compilation of the results.

This chapter will present and discuss in detail the results obtained from the collected and analysed data, and interpret the findings obtained in the research phase of the study. The chapter starts with a brief summary of the various research objectives and hypotheses for the study. A discussion of the realisation rate, general demographic profile, and mobile network subscriber's behaviour analysis follows. This leads to a detailed analysis of the collected data and descriptive statistics. The chapter concludes by outlining the exploratory factor analysis (EFA), the confirmatory factor analysis (CFA) procedure, the evaluation of structural equation modelling (SEM), and the results of the mediation process that was done to explore the relationship between the adopted variables and to test the stated hypotheses for the study.

6.2 SUMMARY OF RESEARCH OBJECTIVES AND HYPOTHESES

As established in Chapter 1 (section 1.4.1), the primary objective of the study was **to examine the factors that influence customer satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria**.

For the primary objective to be actualised, **the secondary objectives in Chapter 1 (section 1.4.2)** were proposed by the researcher to give insight into the research problem. From the secondary objectives, different **hypotheses and a framework were formulated in Chapter 1 sections 1.6.2 and 1.7 respectively** to guide the researcher in establishing the scope of the study.

As previously stated in chapter 1 (refer to section 4.1), chapter 4 (refer to section 4.2) and chapter five (refer to section 5.3.2) the formulated hypotheses were statistically tested. The results are presented in the sections that follow.

6.3 REALISATION RATE

A non-probability snowball sampling method was used through an online survey to retrieve 390 fully completed questionnaires that were considered fit for data analysis after cleaning the data, from 419 responses obtained from the targeted sample size of respondents, as mentioned in Chapter 5 (refer to section 5.3.7.2). The realisation rate for this study therefore stood at 93.1%.

It is worth noting that the respondents answered two screening questions before they could proceed with completing the questionnaire, to ensure that they met the inclusion criteria set for the study. All 390 respondents answered 'yes' to the screening questions that they:

- Were subscribers of any of the top four mobile network providers in the Nigerian telecommunications industry (MTN, GLO, AIRTEL and 9MOBILE)
- had consistently used their SIM card in the previous six months
- were aged from 18 to 65

The next section discusses the demographic profile and cell phone patronage behaviour.

6.4 DEMOGRAPHIC PROFILE AND CELL PHONE PATRONAGE BEHAVIOUR

Section A of the questionnaire gathered data on the respondents' demographic profile and their cellphone patronage behaviour. The results of these sections are presented as frequencies and percentages, as seen in Table 6.1. The respondents' gender and age, how many SIM cards they had, the name of their primary mobile telecommunications operator, how long they had been with their mobile network provider, which mobile service they spent more on, and the amount spent on mobile services are discussed and described using descriptive statistics.

Table 6. 1: General and demographic information of respondents in the study

General demographic information		Frequency	Percentage
Items	**Description**		
Gender	Male	210	53.8
	Female	117	45.4
	Prefer not to say	3	0.8
	Total	390	100.0
Age bracket	18-27	205	52.6
	28-37	153	39.2
	38-46	24	6.2
	47-56	8	2.1
	57-65	0	0
	Prefer not to say	0	0
	Total	390	100.0
Number of SIM cards	1	59	15.1
	2	187	47.9
	3	101	25.9
	4	35	9.0
	5 and more	8	2.1
	Total	390	100.0
Network provider	MTN	240	61.5
	GLO	47	12.1
	AIRTEL	66	16.9
	9MOBILE	37	9.5
	Total	390	100.0

		Frequency	Percentage
Items	**Description**		
Years with mobile network provider	Between 6 and 12 months	21	5.4
	1year or more, but less than 2 years	28	7.2
	2years or more, but less than 3years	24	6.2
	3years or more, but less than 4years	20	5.1
	4years or more, but less than 5years	19	4.9
	5years or more, but less than 6years	31	7.9
	6years or more	247	63.3
	Total	390	100.0
Mobile network services spent more on	Airtime	60	15.4
	Data subscription	330	84.6
	Other services, please specify:	0	0
	Total	390	100.0
Monthly spending on mobile network services	N500-N1000	14	3.6
	N1100-N2000	41	10.5
	N2100-N3000	66	16.9
	N3100-N4000	48	12.3
	N4100 and more	221	56.7
	Total	390	100.0

From Table 6.1, it can be observed that, of the 390 respondents who completed the questionnaire, most were male (53.8%, n=210); the female respondents made up 45.4% (n=117). A majority of the respondents were aged from 18 to 27 (52.6%, n=205), followed by those aged from 28 to 37 (39.2%, n=153). The results also showed that most of the respondents owned two SIM cards (47.9%, n=187), with only 2.1% owning five or more. The majority of the mobile network subscribers were MTN users (61.5%, n=240), with the smallest number of respondents coming

from 9mobile (9.5%, n=37). Most of the mobile network subscribers had been with their primary network provider for six years or more (63.3%, n=247). Data subscription (84.6%, n=330) was the mobile network service with the biggest spend by the vast majority of the respondents. For monthly spending on mobile network services, the highest representation came from the bracket spending N4100 and more (56.7%, n= 221).

The next section will give a descriptive analysis of the factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry.

6.5 DESCRIPTIVE ANALYSIS OF THE FACTORS INFLUENCING CUSTOMER SATISFACTION AND LOYALTY IN THE NIGERIAN TELECOMMUNICATIONS INDUSTRY

The discussion in this section presents the descriptive results related to sections B and C of the questionnaire, and also addresses the secondary objectives stated in Chapter 1 (section 1.4.2) and mentioned in section 6.2. This is to give clarity to the outlined research objectives. The section also discusses the influence of the independent variables (customer service, price fairness, network quality, diversity of products, and overall service quality) on customer loyalty, which is the dependent variable, through the intervening variables of customer satisfaction, trust, commitment, and low switching costs.

6.5.1 Customer perceptions and expectations

Section B of the research questionnaire, which contained 33 statements, measured respondents' perceptions and expectations of factors that influence customer satisfaction in the mobile telecommunications industry. All the variables (customer service, price fairness, network quality, diversity of products, and overall service quality) were measured using a five-point Likert scale, and respondents were requested to indicate their level of agreement with the statement where 1 indicated 'strongly disagree' and 5 indicated 'strongly agree'. Table 6.2 provides the various descriptive statistics (mean and standard deviation) for each of the statement items. Descriptive statistics (such as the mean and standard deviation) helped the researcher to compare the variables, reduce the series of data to a single figure (or an average), and reflect on how the data was spread around the mean (Wiid & Diggines, 2015:252-253).

Table 6. 2: Descriptive statistics for customer perceptions and expectations.

Section B - Customer perceptions and expectations				
Customer service	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
B1 My mobile network service provider's customer care representatives are courteous in handling my complaints	3.39	0.969	-0.161	-0.226
B2 I consider customer service as an important factor when evaluating a mobile network provider	4.17	1.176	-1.327	0.736
*B3 I am not happy with the long delays I experience each time I make a call to my mobile network provider's customer care line (reverse coded)	1.86	1.219	1.219	0.294
B4 My mobile network provider's reputation for good service is encouraging	3.34	0.995	-0.068	-0.289
B5 I find dealing with my current mobile network provider convenient	3.41	1.074	-0.311	-0.393
B6 My current mobile network provider makes its customer service easily accessible through shops, call centres, their website etc	3.52	1.099	-0.449	-0.470
B7 My current mobile network provider has a user-friendly website	3.35	1.041	-0.349	-0.210
B8 My current mobile network provider has an online customer care	3.65	1.096	-0.441	-0.444
B9 My current mobile network provider offers customised (personalised) care to its customers	2.96	1.160	0.001	-0.717
B10 My complaints to the customer care representatives are resolved speedily	3.21	1.115	-0.233	-0.551

B11 I find my current mobile network provider's customer care department being able to provide me with all the information i need	3.49	1.031	-0.333	-0.320
Overall customer service expectation	**3.31**	**1.089**		
Price fairness	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
B12 The quality of the service I receive from my mobile network provider is worth the price	2.88	1.232	-0.021	-.0960
B13 The services I get from my mobile network provider justify their higher prices	2.52	1.210	0.311	-0.877
B14 The overall advantages I receive from my mobile network provider are more than what I expected	2.48	1.096	0.316	-0.595
B15 Generally, I am happy using services and products from my current mobile network	3.09	1.056	-0.164	-0.379
B16 Overall my mobile network provider delivers what they promise	3.27	1.041	-0.128	-0.499
B17 The prices I have seen from other mobile networks are consistent with my current mobile network provider	3.24	1.102	-0.304	-0.488
Overall price fairness expectation	**2.91**	**1.123**		
Network quality	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
B18 I am satisfied with the network coverage offered by my current mobile network provider	3.46	1.166	-0.415	-0.645
B19 My mobile network covers most of the places I frequent	3.81	1.143	-0.807	-0.179

B20 My mobile network provider acts promptly to keep up with technology advancements by upgrading its network system	3.71	1.048	-0.573	-0.151
B21 Most of the countries or other places I visit are covered by my mobile network operator through roaming	3.51	1.099	-0.447	-0.258
B22 I will not consider switching to another mobile network provider because of my current network coverage	3.32	1.236	-0.237	-0.826
Overall network quality expectation	**3.56**	**1.138**		
Diversity of products	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
B23 My current mobile network provider offers me diverse services compared to other mobile network providers	3.27	1.012	0.015	-0.374
B24 The services offered by my network provider are very different from each other	3.21	1.031	-0.207	-0.194
B25 I consider the services offered by all mobile network providers similar	3.61	1.057	-0.482	-0.246
B26 My current mobile network provider welcomes ideas or information from customers to enable it work effectively	2.78	1.065	0.032	-0.362
B27 My current mobile network provider clearly communicates when new services or products are available	3.70	1.064	-0.480	-0.365
Overall diversity of products expectation	**3.31**	**1.046**		

Overall service quality	Mean	Standard deviation	Skewness	Kurtosis
B28 My mobile network provider follows up in a timely manner to customer requests	3.19	1.015	-0.170	-0.171
B29 The customer care representatives of my mobile network operator are always willing to help me	3.50	1.006	-0.252	-0.463
B30 The responses to customers complaints are always taken seriously	3.37	1.018	-0.170	-0.315
B31 My mobile network operator provides timely information when there are new services	3.65	1.018	-0.497	-0.194
B32 My mobile network operator is consistent in providing good quality service	3.44	0.965	0.300	-0.179
B33 My calls, text messages and internet services always go through, I hardly encounter network problems	3.19	1.250	-0.287	-0.921
Overall service quality expectation	**3.39**	**1.045**		

***Reverse coded**

The next sections discuss the results presented in Table 6.2.

6.5.1.1 Descriptive results for customer service

The mean scores of the perceptions and expectations of customer service varied from 1.86 to 4.17 (1 = 'strongly disagree' and 5 = 'strongly agree') and the standard deviation ranged between 0.969 and 1.219. The overall mean for the perceptions and expectations of customer service was 3.31, indicating that the respondents neither agreed nor disagreed with the statements measuring their perceptions and expectations of customer service. Respondents agreed most with statement item B2: "I consider customer service as an important factor when evaluating a mobile network provider" (mean =4.17 and standard deviation = 1.176). The original statement for B3 read: "I am not happy with the long delays I experience each time I make a call to my mobile network provider's customer care line". This item was reverse coded for the calculation of the mean and

standard deviation to remove the negative connotation, and to match all the other positively stated items in the rest of the customer service scale, with a mean = 1.86 and standard deviation = 1.219.

- **Main finding 1:** Overall, respondents neither agreed nor disagreed with the statements measuring their perceptions and expectations of customer service (mean = 3.31).
- **Main finding 2:** Respondents indicated their highest level of agreement with statement item B2: "I consider customer service as an important factor when evaluating a mobile network provider" (mean = 4.17 and standard deviation = 1.176).
- **Main finding 3:** Respondents indicated their lowest level of agreement with statement item B3 regarding their happiness with the long delays they experienced each time they made a call to their mobile network provider's customer care line (mean = 1.86 and standard deviation = 1.219).

6.5.1.2 Descriptive results for price fairness

The mean score levels of customer perceptions and expectations of price fairness ranged from 2.48 to 3.27 (1 = 'strongly disagree' and 5 = 'strongly agree') and the standard deviation varied from 1.041 to 1.232. The overall mean for the respondents' perceptions and expectations of price fairness was somewhat low at 2.91, which indicates that most respondents tended to disagree with the statements measuring their perceptions and expectations of price fairness. The statement item with which respondents agreed most was B16: "Overall my mobile network provider delivers what they promise" (mean = 3.27 and standard deviation = 1.041). Respondents agreed the least with statement item B14: "The overall advantages I receive from my mobile network provider are more than what I expected" (mean = 2.48 and standard deviation = 1.096), which indicates that respondents held the opinion that the overall advantages they received from their mobile network provider were less than they had expected.

- **Main finding 4:** Overall, most respondents disagreed with the statement items measuring their perceptions and expectations of price fairness (mean = 2.91).
- **Main finding 5:** Respondents agreed most with B16: "Overall my mobile network provider delivers what they promise" (mean = 3.27 and standard deviation = 1.041).
- **Main finding 6:** Respondents agreed least with B14: "The overall advantages I receive from my mobile network provider are more than what I expected" (mean = 2.48 and standard deviation = 1.096).

6.5.1.3 Descriptive results for network quality

The mean scores for respondents' perceptions and expectations for network quality ranged between 3.32 and 3.81 (1 = 'strongly disagree' and 5 = 'strongly agree'), and the standard deviation ranged from 1.048 to 1.236. The overall mean score was 3.56, which indicates that respondents neither agreed nor disagreed with the statement items measuring their network quality perceptions and expectations but tilted more towards agreed. The statement item that had the strongest level of agreement was B19: "My mobile network covers most of the places I frequent" (mean = 3.81 and standard deviation =1.143). The statement item with the lowest level of agreement was B22: "I will not consider switching to another mobile network provider because of my current network coverage" (mean = 3.32 and standard deviation = 1.236).

- **Main finding 7:** Overall, most respondents indicated that they neither agreed nor disagreed with the statement items measuring their network quality perceptions and expectations (mean = 3.56).
- **Main finding 8:** Respondents strongest level of agreement was with statement item B19: "My mobile network covers most of the places I frequent" (mean = 3.81 and standard deviation = 1.143).
- **Main finding 9:** Respondents' weakest level of agreement was with statement item B22: "I will not consider switching to another mobile network provider because of my current network coverage" (mean = 3.32 and standard deviation = 1.236).

6.5.1.4 Descriptive results for diversity of products

The mean scores for respondents' perceptions and expectations for diversity of products varied between 2.78 and 3.70 (1 = 'strongly disagree' and 5 = 'strongly agree'), while the standard deviation ranged from 1.012 to 1.065. Overall, the mean for the respondents' perceptions and expectations of diversity of products stood at 3.31, which indicates that respondents neither agreed nor disagreed with the statement items measuring diversity of products. The statement item with the highest level of agreement from respondents was B27: "My current mobile network provider clearly communicates when new services or products are available" (mean = 3.70 and standard deviation = 1.064). Statement item B26: "My current mobile network provider welcomes ideas or information from customers to enable it work effectively" (mean =2.78 and standard deviation = 1.065) recorded the lowest level of agreement. This shows that mobile network providers have not put in place a medium to enable acceptance of ideas or information from customers to enable the network to work effectively.

- **Main finding 10:** Overall, respondents neither agreed nor disagreed with the statement items measuring diversity of products (mean = 3.31).
- **Main finding 11:** Respondents' highest level of agreement was with statement item B27: "My current mobile network provider clearly communicates when new services or products are available" (mean = 3.70 and standard deviation = 1.064).
- **Main finding 12:** Respondents; lowest level of agreement was with statement item B26: "My current mobile network provider welcomes ideas or information from customers to enable it work effectively" (mean = 2.78 and standard deviation = 1.065).

6.5.1.5 Descriptive results for overall service quality

Six statement items were used to measure respondents' overall service quality. The mean scores of the items varied from 3.19 to 3.65 (1 = 'strongly disagree' and 5 = 'strongly agree'), and the standard deviation ranged between 0.965 and 1.250. The overall mean score was 3.39, which indicated that respondents neither agreed nor disagreed with statement items measuring their perceptions and expectations of overall service quality. The statement item with which respondents agreed the most was B31: "My mobile network operator provides timely information when there are new services" (mean = 3.65 and standard deviation = 1.018). The two statement items with which respondents agreed the least were: "My mobile network provider follows up in a timely manner to customer requests" (B28) (mean = 3.19 and standard deviation = 1.015) and "My calls, text messages and internet services always go through, I hardly encounter network problems" (B33) (mean = 3.19 and standard deviation = 1.250).

- **Main finding 13:** Overall, respondents neither agreed nor disagreed with statement items measuring their perceptions and expectations of overall service quality (mean = 3.39).
- **Main finding 14:** Respondents agreed the most with B31: "My mobile network operator provides timely information when there are new services" (mean = 3.65 and standard deviation = 1.018).
- **Main finding 15:** Respondents agreed the least with B28: "My mobile network provider follows up in a timely manner to customer requests" (mean = 3.19 and standard deviation = 1.015) and B33: "My calls, text messages and internet services always go through, I hardly encounter network problems" (mean = 3.19 and standard deviation = 1.250).

6.5.1.6 Overall mean and standard deviation scores for customers' perceptions and expectations of factors that influence customer satisfaction

The overall mean and standard deviation scores for the adopted factors that influence customer satisfaction in the mobile telecommunications industry (customer service, price fairness, network quality, diversity of products, and overall service quality) are indicated in Table 6.3 below.

Table 6. 3: Overall mean and standard deviation scores for customers' perceptions and expectations of factors that influence customer satisfaction

Overall mean and standard deviation scores	Mean	Standard deviation
Customer service	3.31	1.089
Price fairness	2.91	1.123
Network quality	3.56	1.138
Diversity of products	3.31	1.046
Overall service quality	3.39	1.045

Based on Table 6.3, network quality has the highest mean score or level of agreement for each of the statement items (mean = 3.56), while price fairness received the lowest mean score or level of agreement for the statements (mean = 2.91). For the rest of the constructs, the respondents neither agreed nor disagreed with the statements.

- **Main finding 16:** Respondents indicated that the factor with the highest level of agreement was network quality (mean = 3.56 and standard deviation = 1.142).
- **Main finding 17:** Respondents indicated that the factor with the lowest level of agreement was price fairness (mean = 2.91 and standard deviation = 1.123).

The next section discusses the descriptive statistics for customers' overall satisfaction level, relationship intentions, and customer loyalty.

6.5.2 Customers' overall satisfaction level, relationship intentions, and customer loyalty

This section focuses on Section C of the research questionnaire, which contained 27 statements that measured respondents' overall customer satisfaction level, relationship intentions, and customer loyalty in the mobile telecommunications industry. All the variables (customer satisfaction, trust, commitment, low switching costs, and customer loyalty) were measured using a five-point Likert scale; respondents were requested to indicate their level of agreement with the statements, where 1 indicated 'strongly disagree' and 5 indicated 'strongly agree'. Table 6.4

provides the various descriptive statistics (mean and standard deviation) for each of the statement items.

Table 6. 4: Descriptive statistics for customers' overall satisfaction level, relationship intentions, and customer loyalty.

Section C – **Customers' overall satisfaction level, relationship intentions, and customer loyalty**				
Customer satisfaction	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
C1 My mobile network provider's services completely meet my expectations	3.12	1.070	-0.204	-0.508
C2 I am satisfied with the interactions that I have had with my mobile network provider's customer service agents	3.28	1.015	-0.203	-0.324
C3 I am satisfied with my mobile network provider's price	2.68	1.156	0.116	-0.821
C4 I am satisfied with my mobile network provider's network coverage	3.39	1.197	-0.428	-0.677
C5 Using services from my mobile network provider has been a worthwhile experience	3.41	0.983	-0.280	-0.279
Overall customer satisfaction level	**3.18**	**1.084**		
Trust	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
C6 I trust my mobile network provider	3.28	1.070	-0.195	-0.508
C7 I feel that I can rely on my current mobile network provider to serve me well	3.38	1.069	-0.332	-0.325

	Mean	Standard deviation	Skewness	Kurtosis
C8 I trust the billing system of my mobile network provider	2.64	1.142	0.117	-0.765
C9 I believe that my current mobile network provider will not try to cheat me	2.58	1.126	0.269	-0.574
C10 My current mobile network provider is reliable because it's mainly concerned with the customer's interest	2.88	1.012	0.014	-0.334
C11 My mobile network provider wants to be known as one which keeps promises and commitments	3.26	1.052	-0.261	-0.163
Overall trust level	**3.00**	**1.079**		
Commitment	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
C12 I feel emotionally attached to my current mobile network service provider	2.98	1.384	-0.050	-1.232
C13 I wish to maintain my relationship with my current mobile network service provider	3.40	1.147	-0.293	-0.508
C14 I feel committed to my current mobile network service provider	3.26	1.185	-0.181	-0.759
C15 I am so familiar with my mobile network provider that it would be difficult to change it	3.39	1.311	-0.343	-0.957
C16 All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider	3.45	1.157	-0.395	-0.545
Overall commitment level	**3.30**	**1.237**		

Low switching costs	Mean	Standard deviation	Skewness	Kurtosis
*C17 I am scared of changing my mobile number if I switch from my current mobile network provider	2.68	1.347	0.268	-1.068
*C18 I fear that I will lose some benefits that I currently enjoy if I switch to another network	3.09	1.294	-0.056	-0.983
*C19 The inconvenience of having to learn a new service is too much	3.08	1.353	-0.059	-1.153
*C20 I am not ready to go through the hassle of searching for information on a new mobile operator when switching	2.85	1.296	0.094	-1.026
*C21 I worry that I might pay a subscription fee to join an alternative mobile network operator	3.77	1.205	-0.619	-0.584
Overall low switching costs	**3.09**	**1.299**		
Customer loyalty	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
C22 I would recommend my current mobile network service provider to someone who seeks my advice	3.51	1.059	-0.355	-0.295
C23 I would encourage my friends and relatives to do business with my network provider	3.39	1.067	-0.227	-0.259
C24 I would say positive things about my current mobile network provider to other people	3.48	1.000	-0.292	-0.086
C25 I am willing to purchase other services and do more business with my current mobile network provider in the next few years	3.73	0.962	-0.436	-0.065

	Mean	Standard deviation	Skewness	Kurtosis
C26 I intend to keep patronizing my current network provider	3.66	1.087	-0.515	-0.262
C27 I am a loyal customer of my current mobile network provider	3.51	1.028	-0.263	-0.285
Overall customer loyalty	**3.55**	**1.034**		

***** Reverse coded

The next sections discuss the results presented in Table 6.4.

6.5.2.1 Descriptive results for customer satisfaction

The mean scores for customer satisfaction varied from 2.68 to 3.41 (1 = 'strongly disagree' and 5 = 'strongly agree') and the standard deviations ranged between 0.983 and 1.197. The overall mean for customer satisfaction was 3.18, indicating that most respondents neither agreed nor disagreed but leaned more towards disagreeing-with the statements measuring their satisfaction. Respondents agreed most with statement item C5: "Using services from my mobile network provider has been a worthwhile experience" (mean = 3.41 and standard deviation = 0.983). The statement item with which respondents least agreed was C3: "I am satisfied with my mobile network provider's price" (mean = 2.68 and standard deviation = 1.156).

- **Main finding 18:** Overall, most respondents neither agreed nor disagreed - but leaned more towards disagreeing-with the statements measuring their satisfaction (mean = 3.18).
- **Main finding 19:** Respondents indicated their highest level of agreement with statement item C5: "Using services from my mobile network provider has been a worthwhile experience" (mean = 3.41 and standard deviation = 0.983).
- **Main finding 20:** Respondents indicated their lowest level of agreement with statement item C3: "I am satisfied with my mobile network provider's price" (mean = 2.68 and standard deviation = 1.156).

6.5.2.2 Descriptive results for trust

The mean score levels for trust ranged from 2.58 to 3.38 (1 = 'strongly disagree' and 5 = 'strongly agree'), and the standard deviations varied from 1.012 to 1.142. The overall mean for

respondents' trust is relatively low (3.00), which indicates that most respondents disagreed with the statements measuring their relationship intention of trust. The statement item with which respondents agreed most was C7: "I feel that I can rely on my current mobile network provider to serve me well" (mean = 3.38 and standard deviation = 1.069). Respondents agreed the least with statement item C9: "I believe that my current mobile network provider will not try to cheat me" (mean = 2.57 and standard deviation = 1.128), which indicates that respondents hold the opinion that their current mobile network provider will try to cheat them.

- **Main finding 21:** Overall, most respondents disagreed with the statement items measuring their relationship intention of trust (mean = 3.00).
- **Main finding 22:** Respondents agreed most with C7: "I feel that I can rely on my current mobile network provider to serve me well" (mean = 3.38 and standard deviation= 1.069).
- **Main finding 23:** Respondents agreed the least with C9: "I believe that my current mobile network provider will not try to cheat me" (mean = 2.57 and standard deviation = 1.128).

6.5.2.3 Descriptive results for commitment

The mean scores for respondents' commitment level ranged between 2.98 and 3.45 (1 = 'strongly disagree' and 5 = 'strongly agree') and the standard deviation ranged from 1.147 to 1.384. The overall mean score was 3.30, which indicates that respondents neither agreed nor disagreed with the statement items measuring their relationship intention of commitment. The statement item that had the strongest level of agreement was C16: "All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider" (mean = 3.45 and standard deviation = 1.157). The statement item with the weakest level of agreement was C12: "I feel emotionally attached to my current mobile network service provider" (mean = 2.98 and standard deviation = 1.384).

- **Main finding 24:** Overall, most respondents indicated that they neither agreed nor disagreed with the statement items measuring their commitment level (mean = 3.30).
- **Main finding 25:** Respondents' strongest level of agreement was with statement item C16: "All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider" (mean = 3.45 and standard deviation =1.157).
- **Main finding 26:** Respondents' weakest level of agreement was statement item C12: "I feel emotionally attached to my current mobile network service provider" (mean = 2.98 and standard deviation = 1.384).

6.5.2.4 Descriptive results for low switching costs

The statement items for low switching costs were initially negatively stated in the questionnaire, so they were reverse coded for this analysis (Pallant, 2010:97). The mean and standard deviation are the reverse-coded values. By reverse coding, low switching costs is actually measured. Therefore the mean scores for low switching costs varied between 2.68 and 3.77 (1 = 'strongly disagree' and 5 = 'strongly agree'), while the standard deviations ranged from 1.205 to 1.353. Overall, the mean for low switching costs stood at 3.09, which indicates that respondents disagreed with the statement items measuring low switching costs. The statement item with the highest level of agreement from respondents was *C21: "I worry that I might pay a subscription fee to join an alternative mobile network operator" (mean = 3.77 and standard deviation = 1.205). Statement item *C17: "I am scared of changing my mobile number if I switch from my current mobile network provider" (mean =2.68 and standard deviation = 1.347) recorded the lowest level of agreement. This shows that mobile network subscribers are not worried that they might pay a subscription fee to join an alternative mobile network operator.

- **Main finding 27:** Overall, respondents disagreed with the statement items measuring low switching costs (mean = 3.09).
- **Main finding 28:** Respondents' highest level of agreement was with statement item *C21: "I worry that I might pay a subscription fee to join an alternative mobile network operator" (mean = 3.77 and standard deviation = 1.205).
- **Main finding 29:** Respondents' lowest level of agreement was with statement item *C17: "I am scared of changing my mobile number if I switch from my current mobile network provider" (mean = 2.68 and standard deviation = 1.347)

6.5.2.5 Descriptive results for customer loyalty

Six statement items were used to measure respondent's customer loyalty. The mean scores of the items varied from 3.39 to 3.73 (1 = 'strongly disagree' and 5 = 'strongly agree') and the standard deviation ranged between 0.962 and 1.087. The overall mean score was 3.55, which indicates that respondents neither agreed nor disagreed with statement items measuring their customer loyalty. The statement item with which respondents agreed the most was C25: "I am willing to purchase other services and do more business with my current mobile network provider in the next few years" (mean = 3.73 and standard deviation = 0.962). The statement item with which respondents agreed the least was: "I would encourage my friends and relatives to do business with my network provider" (C23) (mean = 3.39 and standard deviation = 1.067).

- **Main finding 30:** Overall, respondents neither agreed nor disagreed with statement items measuring their customer loyalty (mean = 3.55).
- **Main finding 31:** Respondents' agreed the most with C25: "I am willing to purchase other services and do more business with my current mobile network provider in the next few years" (mean = 3.73 and standard deviation = 0.962).
- **Main finding 32:** Respondents' agreed the least with C23: "I would encourage my friends and relatives to do business with my network provider" (mean = 3.39 and standard deviation = 1.067).

6.5.2.6 Overall mean and standard deviation scores for customer overall satisfaction level, relationship intentions, and customer loyalty

The overall mean and standard deviation scores for customer satisfaction level, relationship intentions (trust and commitment) and customer loyalty are indicated in Table 6.5 below.

Table 6. 5: Overall mean and standard deviation scores for customer overall satisfaction level, relationship intentions and customer loyalty.

Overall mean and standard deviation scores	Mean	Standard deviation
Customer satisfaction	3.18	1.084
Trust	3.00	1.079
Commitment	3.30	1.237
Low switching costs	3.09	1.299
Customer loyalty	3.55	1.034

Based on Table 6.5, customer loyalty had the highest mean score or level of agreement for each of the statement items asked, while trust received the lowest mean score or level of agreement for the statements asked. It is noteworthy that the overall mean scores achieved for customer satisfaction, trust, commitment and low switching costs were all neutral.

- **Main finding 33:** Respondents indicated that the factor with the highest level of agreement was customer loyalty (mean = 3.55 and standard deviation = 1.034).

- **Main finding 34:** Respondents indicated that the factor with the lowest level of agreement was trust (mean = 3.00 and standard deviation = 1.079).

The next section describes the statistical procedure for factor analysis.

6.6 FACTOR ANALYSIS

As discussed briefly in Chapter 5 section 5.3.10.4, factor analysis was carried out on the data collected from the online questionnaire (Google Forms, 2020) to reveal the possible relationship among the variables and to break the large number of variables down into smaller relatable numbers of factors for easy management (Aaker, Kumar, Leone & Day, 2013:442; Wiid & Diggines, 2015:289). Most importantly, as previously mentioned, factor analysis was carried out to ensure that the items measured were actually relevant to the scale and were measuring the variables intended (construct validity) (Heale & Twycross, 2015:66; Saunders et al., 2016:450) (refer to Chapter 5, section 5.3.10.1.2).

6.6.1 Normality

Before any further statistical analysis was carried out, the normality of data distribution was checked using skewness and kurtosis (refer to Chapter 5 section 5.3.10.4). Skewness must be between the levels of -2 and +2 and kurtosis must be between -7 and +7 for data to be normally distributed (West, Finch & Curran, 1995:79). It can be deduced from Table 6.2 (refer to section 6.5.1) and Table 6.4 (refer to section 6.5.2) that all of the items in this study fell within the parameters and thus confirming that all data were evenly distributed (Pallant, 2010:57).

- **Main finding 35:** All of the constructs customer service, price fairness, network quality, diversity of products, overall service quality, customer satisfaction, trust, commitment, low switching costs, and customer loyalty - met the assumptions of normality.

6.6.2 Determining suitability of data

When conducting a factor analysis, there are two main issues to consider before determining whether the data is suitable for analysis. The first is the sample size, and the second is how strongly each item relates to the others (Pallant, 2010:187). Tabachnick and Fidell (2007:613) suggest that a sample size of at least 300 should be used, or alternatively a ratio of cases to items of five to ten respondents to one scale item. In this study, the sample size was > 300, and there were 60 items and 390 submitted useable cases, which indicates that there were about seven respondents per item. This indicates that the sample size and ratio were sufficient for factor analysis.

Second, the strength of the relationship between the items must be considered. The inter-item correlations were considered; and most coefficients were above 0.3 (Pallant, 2010:183). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity, which indicates that factor analysis is suitable when the value is between 0.5 and 1.0 (Malhotra, 2010:638) were considered. However, both authors agree that the Bartlett's test of sphericity value must be $p \leq 0.05$. The KMO measure for this study was 0.946, with the Bartlett's test of sphericity being ≤ 0.000. These two measures indicate that the data was suitable for factor analysis.

There are two types of factor analysis; exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Wiid & Diggines, 2015:242). For this study, an exploratory factor analysis (EFA) was first carried out on each of the adopted factors to establish the interrelationship among the set of variables, and to determine which factor needed to be removed (Pallant, 2010:181; Reynolds-De Bruin, 2013:186). A confirmatory factor analysis (CFA) was then conducted to confirm the structure. Although many researchers state that an EFA and a CFA should not be conducted on the same data, Plucker (2003:33) suggests that, since the EFA only explores the data to determine how many factors should be retained for further analysis, and does not test a specific model or structure (as the CFA does), it is necessary to report on both EFA and CFA in a dissertation. This is supported by Hurley, Scandura, Schriesheim, Brannick, Seers, Vandenberg and Williams (1997:676).

The next section discusses the results of the EFA, followed by the results of the CFA.

6.6.3 Exploratory factor analysis (EFA)

It is worth noting that, although the scale items in the questionnaire were adapted from previous studies (refer to Chapter 5, section 5.3.6.2), it is still essential to conduct an EFA to ensure that the items measure the intended construct, specifically because these have not been previously tested in an African environment. In this study, an exploratory factor analysis (EFA) using principal components analysis with a Direct Oblimin rotation (with Kaiser Normalisation) was conducted, which revealed the structure and relationships between all the items in the study. This method was used, as the oblique technique of Direct Oblimin rotation provides more information on the extent of the correlations between factors, which the orthogonal (the most commonly used Varimax) does not, making it more difficult to determine the correlation pattern and interpret the findings of a factor analysis (Pallant, 2010:184). It should be noted that, for the factor analysis, the Kaiser criterion was used, where only factors with Eigenvalues of above 1 and factor loadings of above 0.4 were retained for further analysis, as suggested by Pallant (2010:183).

The sections below provide a detailed discussion of the factor analysis conducted on the factors influencing customer satisfaction and loyalty in the Nigerian mobile telecommunications industry.

6.6.3.1 Factors influencing customer satisfaction, customer satisfaction, relationship intentions (trust, low switching costs, and commitment), and customer loyalty factor analysis

This section explains the EFA carried out for the perceptions and expectations of mobile services, customer satisfaction, the relationship intention variables of trust, low switching costs and commitment, and customer loyalty. Table 6.6 shows the Eigenvalues, communality values, factor/pattern matrix with the factor loadings, and cumulative percentages for each factor.

Table 6. 6: Eigenvalues, communality values, factor/pattern matrix, and cumulative percentages for factors influencing customer satisfaction, customer satisfaction, relationship intentions (trust, low switching costs, and commitment), and customer loyalty factor analysis

Constructs and items	Communalities	Eigenvalue	Pattern matrix					Cumulative percentage
Price fairness			F1	F2	F3	F4	F5	Factor 1
B12	0.710	F1:34.385	0.809					34.39%
B14	0.628		0.805					
B13	0.619		0.713					
B15	0.727		0.665					
B16	0.692		0.645					
B22	0.512		0.502					
Overall service quality								Factor 2
B29	0.691	F2:5.293		0.825				39.68%
B31	0.708			0.796				
B30	0.726			0.771				
B28	0.635			0.696				
B27	0.559			0.596				
B10	0.640			0.580				
B9	0.618			0.459				
B32	0.651			0.439				
Network quality								Factor 3
B19	0.769	F3:4.534			0.877			44.21%
B18	0.724				0.813			
B20	0.684				0.667			
B33	0.593				0.571			

Constructs and items	Communalities	Eigenvalue	Pattern matrix					Cumulative Percentage
B21	0.512			0.445				
Customer care								Factor 4
B3	0.592	F4:4.013			0.549			48.22%
B1	0.579				0.490			
B5	0.583				0.447			
B4	0.608				0.439			
Customer service access								Factor 5
B9	0.618	F5:3.060				0.701		51.28%
B8	0.630					0.678		
B26	0.484					0.614		
B6	0.465					0.578		
Customer satisfaction			F6	F7	F8	F9	F10	Factor 6
C1	0.740	F6:2.665	0.860					53.95%
C5	0.678		0.823					
C4	0.594		0.771					
C2	0.559		0.747					
C3	0.459		0.677					
Trust								Factor 7
C8	0.714	F7:2.281		0.874				56.23%
C10	0.685			0.819				
C9	0.648			0.816				
C6	0.630			0.681				
C11	0.560			0.672				
C7	0.608			0.623				
Low switching costs								Factor 8
C16	0.614	F8:2.222			0.801			58.45%
C14	0.689				0.777			
C15	0.658				0.728			
C13	0.549				0.591			
C12	0.345				0.476			
Commitment								Factor 9
C17	0.692	F9:1.972				0.785		60.42%
C20	0.673					0.774		
C19	0.748					0.752		
C18	0.720					0.749		
C21	0.161					0.364		
Customer loyalty								Factor 10
C24	0.783	F10:1.133					0.885	62.31%
C23	0.781						0.884	
C22	0.778						0.882	
C25	0.698						0.835	
C27	0.596						0.772	
C26	0.590						0.768	

Note: *All loadings of less than 0.4 were omitted for the analysis and all items with cross-loadings were removed and are not shown in the table*

To assess the criteria of the cumulative percentage of variance, 60% is considered sufficient (Wiid & Diggines, 2015:246). From Table 6.6, it can be noted that 10 factors could be retained, with 62.31% of the variance extracted explaining the 10 factors. From the EFA, it was noted that the original items measuring diversity of products did not load onto any factors, and had loadings of less than 0.4; **this construct was therefore removed from any further analysis**. In addition, the original items measuring customer service loaded onto two different factors. This construct from the conceptual model was therefore **split into customer service access and customer care** for further analysis. The next section describes the results of each factor in more detail.

A. Factor 1

From Table 6.6, six items (B12, B13, B14, B15, B16, and B22) loaded onto Factor 1. The price fairness communality values ranged from 0.512 to 0.727. Question B22 ("I will not consider switching to another mobile network provider because of my current network coverage") was the weakest indicator (0.512), while Question B15 ("Generally, I am happy using services and products from my current mobile network") was the strongest indicator. This factor accounted for a variance of 34.39%. Items B13 and B22 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with pricing issues, and were therefore labelled as 'price fairness'.

- **Main finding 36:** Factor 1 was labelled as 'price fairness' (four items retained), and this factor was thus considered valid.

B. Factor 2

For overall service quality, the communality values varied from 0.559 to 0.726. Question B27 ("My current mobile network provider clearly communicates when new services or products are available") represented the weakest indicator (0.559) of the construct, and Question B30 ("The responses to customers complaints are always taken seriously") was the strongest indicator of the factor (0.726). This factor accounted for a variance of 39.68%. Items B9, B29, B31, and B32 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with overall service quality issues, and were therefore labelled as 'overall service quality'.

- **Main finding 37:** Factor 2 was labelled as 'overall service quality' (four items retained), and this factor was thus considered valid.

C. Factor 3

From Table 6.6, Factor 3 network quality had communality values that ranged from 0.512 to 0.769. Question B21 ("Most of the countries or other places I visit are covered by my mobile network operator through roaming") represented the weakest indicator (0.512) of the construct, whereas Question B19 ("My mobile network covers most of the places I frequent") was the strongest indicator (0.769) of network quality perception. This factor accounted for a variance of 44.21%. Items B18 and B19 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with issues concerning network quality, and the factor was therefore labelled as 'network quality'.

- **Main finding 38:** Factor 3 was labelled as 'network quality' (three items retained), and this factor was thus considered valid.

D. Factor 4

The original scales adopted from previous studies on customer service loaded onto two factors in this study. Factor 4 was the first of these two. For the customer care factor, the communality values ranged from 0.579 to 0.608. Question B1 ("My mobile network service provider's customer care representatives are courteous in handling my complaints") represented the weakest indicator (0.579), while Question B4 ("I find dealing with my current mobile network provider convenient") was the strongest indicator (0.608) of the construct. This factor accounted for a variance of 48.22%. Item B3 had a high cross-loading onto another factors, so this item was removed from further analysis using the CFA. The items loading onto Factor 4 centred on how customer service representatives deal with customers and how their problems are resolved, so this factor was labelled 'customer care'.

- **Main finding 39:** Factor 4 was labelled 'customer care' (three items retained) and this factor was thus considered valid

E. Factor 5

Factor 5 from the EFA also linked to the original customer service construct. Factor 5 was the second of these two. The customer service access factor communality values ranged from 0.465 to 0.630. Question B6 ("My current mobile network provider has a user-friendly website") represented the weakest indicator (0.465), while Question B8 ("My current mobile network provider offers customised (personalised) care to its customers") represented the strongest

customer service access indicator (0.630). This factor accounted for 51.28% of the variance. Factor 5 deals with customers being able to have access to customer representatives and service, so this factor was labelled ‘customer service access’.

- **Main finding 40:** Factor 5 was labelled ‘customer service access’ (four items retained), and this factor was thus considered valid

F. Factor 6

From the results of the EFA in Table 6.6, the customer satisfaction communality scores ranged from 0.459 to 0.740. Question C3 (“I am satisfied with my mobile network provider’s price”) had the weakest indicator, while Question C1 (“My mobile network provider’s services completely meet my expectations”) represented the strongest customer satisfaction indicator (0.740). This factor accounted for a variance of 53.95%. Items C2 and C3 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with issues relating to customer satisfaction, and the factor was therefore labelled ‘customer satisfaction’.

- **Main finding 41:** Factor 6 was labelled ‘customer satisfaction’ (three items retained), and this factor was thus considered valid

G. Factor 7

The communality values of trust ranged from 0.560 to 0.714. Question C11 (“My mobile network provider wants to be known as one which keeps promises and commitments”) represented the weakest indicator of the construct (0.560), while Question C8 (“I trust the billing system of my mobile network provider”) was the strongest indicator of trust (0.714). This factor accounted for a variance of 56.23%. Items C8, C9, and C10 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with issues concerning trust, and the factor was therefore labelled ‘trust’.

- **Main finding 42:** Factor 7 was labelled ‘trust’ (three items retained) and this factor was thus considered valid.

H. Factor 8

As previously explained (refer to section 6.5.2.4), the statement items for low switching costs were initially negatively stated in the questionnaire, so they were reverse coded for this analysis

(Pallant, 2010:97). By reverse coding, low switching costs is actually measured. For the low switching costs the communality values varied from 0.345 to 0.689. Question C12 ("I am scared of changing my mobile number if I switch from my current mobile network provider") was the weakest indicator (0.345), whereas Question C14 ("The inconvenience of having to learn a new service is too much") was the strongest low switching costs indicator (0.689). This factor accounted for a variance of 58.45%. Items C13 and C16 had high cross-loadings onto other factors, so these items were removed from further analysis using the CFA. All the items in this factor dealt with issues concerning low switching costs and the factor was therefore labelled 'low switching cost'.

- **Main finding 43:** Factor 8 was labelled 'low switching costs' (three items retained), and this factor was thus considered valid

I. Factor 9

From Table 6.6, the communality values for commitment ranged from 0.161 to 0.748. Question C21 ("All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider") was the weakest indicator, while Question C19 ("I feel committed to my current mobile network service provider") was the strongest commitment indicator (0.748). This factor accounted for a variance of 60.42%. Item C21 had high cross-loading onto another factors, so this item was removed from further analysis using the CFA. All the items in this factor dealt with issues concerning commitment, and the factor was therefore labelled 'commitment'.

- **Main finding 44:** Factor 9 was labelled 'commitment' (four items retained), and this factor was thus considered valid

J. Factor 10

For customer loyalty, the communality values varied from 0.590 to 0.783. Question C26 ("I intend to keep patronising my current network provider") was the weakest indicator, whereas Question C24 ("I would say positive things about my current mobile network provider to other people") was the strongest indicator (0.783) of the construct. This factor accounted for a variance of 62.31%. All the items in this factor dealt with issues concerning customer loyalty, and so the factor was labelled 'customer loyalty'.

- **Main finding 45:** Factor 10 was labelled ‘customer loyalty’ (six items retained) and this factor was thus considered valid.

Summary of the EFA: The construct ‘diversity of products’ from the conceptual model was removed from further analysis because it scored less than 0.4 communality with only two items (Wiid & Diggines, 2015:243). The original customer service construct from the conceptual model was split into two factors - customer care and customer service access. Based on these findings, the following constructs remained for further analysis using the CFA: price fairness, overall service quality, network quality, customer care, customer access, satisfaction, trust, low switching costs, commitment, and customer loyalty. The ten-factor solutions left in the refined model after the factor analysis process were investigated further to determine their reliability. It should also be noted that the minimum of three items per factor suggested by Knekta, Runyon and Eddy (2019:8), was achieved in this study.

6.6.4 Confirmatory factor analysis (CFA)

As was previously discussed in section 6.6.2, an EFA was first conducted to establish the interrelationship among the variables and to understand the structure of the proposed factors in the conceptual model (Hair et al., 2010:99; Pallant, 2010:181; Reynolds-De Bruin, 2013:186). This section presents the results of the CFA that was performed to get the results of the testing and analysis of the measurement model through SEM. The sections below discuss and emphasise the assessment of CFA model fit and the assessment of the factor loadings from CFA (shown in section 6.7, Table 6.8).

- **Assessment of Confirmatory factor analysis (CFA) model fit**

To confirm a good model fit, the CFA model fit was run on AMOS version 26 to check all the correlations. This was done after some scale items had been removed during the EFA procedure (refer to section 6.6.3.1). Nevertheless, the measurement model was scrutinised further to ensure that any inconsistent items were removed from the model (Osman, Saputra & Luis, 2018:526).

The model fit measures used for the CFA stage of the study were the Normed Chi-Square (x^2/df), which is recommended to be less than 3; the adjusted goodness of fit index (AGFI), which should be higher than 0.8; the root-mean-square error of approximation (RMSEA), which should acceptably range between 0.05 and 0.10 (a lower score for RMSEA signals a better fit); the Tucker-Lewis index (TLI), which should preferably generate a score higher than 0.90; and

comparative fit index (CFI), which acceptably should exceed the recommended value of 0.90 (Hair et al., 2010:665-669). Table 6.7 summarises the model of fit results. The table includes what the acceptable fit measurements should be and what the actual results were from the CFA.

Table 6. 7: Model of fit results for the measurement model

Selected indices	Acceptable fit	Model fit values
CMIN - Normed Chi-Square (x^2/df)	(x^2/df) ≤ 3; good fit < 5 sometimes permissible (Hair et al., 2010:665-669).	2.209
RMR - AGFI	≥ 0.8 good fit (Hair et al., 2010:665-669).	0.814
Baseline comparisons - CFI	CFI > 0.90 (moderate fit) and 0.95 (great fit) (Hair et al., 2010:665-669).	0.916
Baseline comparisons - TLI rho2	TLI > 0.90 good fit (Hair et al., 2010:665-669).	0.904
RMSEA - RMSEA	RMSEA < 0.05 good; between 0.05 and 0.10 acceptable (Hair et al., 2010:665-669).	0.056

Considering all the of the model fit values in Table 6.7, this study has a traditional to good model fit. After the CFA had been concluded, the researcher checked whether the study was reliable.

6.7 THE RELIABILITY OF THE MEASUREMENT INSTRUMENT

In Chapter 5 (section 5.3.10.2) it was mentioned that a reliability test would be carried out on the measuring instrument (the questionnaire) using Cronbach's alpha. It is worth mentioning that, although the scale items in the questionnaire were adapted from previous studies (refer to chapter 5, section 5.3.6.2), it was still vital to determine the reliability of the measurement scale items of the study after factor analysis had been conducted. Bagozzi, Yi and Nassen (1998:394) postulated that measurement errors are potential threats to research findings and interpretations, and that it is therefore essential to use multiple measures and multiple methods in measurement and hypothesis-testing to disentangle the influences of these errors. This was adopted because

using a single measure does not permit one to accept reliability during an analysis process (Bagozzi et al., 1998:394). Thus, when conducting a CFA, it is necessary to test the average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha values to ensure reliability.

Table 6. 8: CFA – Factor loadings, AVE, CR, and Cronbach'S alpha

Items / Factor	Factor Loadings	AVE	CR	Cronbach's α
Network quality (NQ)				
B20	0.761	0.452	0.707	0.697
B21	0.528			
B33	0.705			
Overall service quality (OSQ)				
B10	0.689	0.508	0.803	0.792
B27	0.585			
B28	0.745			
B30	0.813			
Price fairness (PF)				
B12	0.752	0.598	0.855	0.852
B14	0.657			
B15	0.816			
B16	0.853			
Customer service access (CSA)				
B6	0.683	0.400	0.700	0.679
B8	0.559			
B9	0.665			
B26	0.456			
Customer care (CC)				
B1	0.500	0.472	0.721	0.702
B4	0.724			
B5	0.801			
Satisfaction (SAT)				
C1	0.811	0.610	0.824	0.821
C4	0.722			
C5	0.806			
Loyalty (LOY)				
C22	0.882	0.649	0.917	0.915
C23	0.888			
C24	0.872			
C25	0.772			
C26	0.690			
C27	0.705			
Trust (TRU)				
C6	0.825	0.617	0.827	0.818
C7	0.865			
C11	0.650			
Commitment (COM)				
C17	0.796	0.657	0.884	0.879

C18	0.816			
C19	0.886			
C20	0.737			
Items / Factor	**Factor Loadings**	**AVE**	**CR**	**Cronbach's α**
Low switching costs (LSC)				
C12	0.425	0.504	0.740	0.707
C14	0.788			
C15	0.843			

- **Average variance extracted (AVE)**

The AVE estimate is the average amount of variation that a latent construct is able to explain in the observed variables to which it is theoretically related (Farrell, 2010:324). Although statistical theory suggests that the factor loadings used to calculate the AVE should be above 0.7, a level of 0.5 is also acceptable in the social sciences (Ibrahim, Shiratuddin & Wong, 2015:30). Knekta et al. (2019:11) state that all decisions should be made while keeping in mind that, even if a factor loading is below 0.5, but it makes theoretical sense to the study, it should be retained. All the factor loadings reported in Table 6.8 that were below 0.5 were considered from a theoretical perspective. Item B26 was retained, as it still relates to the network service provider dealing effectively with customers through information, which is an important part of customers being able to communicate and access their network provider. Item C12 dealt with the consequences of switching, which is also an important aspect of low switching costs. In both cases, the low loadings could be attributed to customers not having experienced the item before which could provide reasons for the lower values. In both cases, however, the items still made theoretical sense to the factor they were measuring, so they were retained - as suggested by Knekta et al. (2019:11).

Traditionally, the AVE should be above 0.5 (Hair et al., 2010:710), but Fornell and Larcker (1981) and Lam (2012:1332) indicate that an AVE of less than 0.5 can be accepted if the CR is above 0.6. All the AVEs in Table 6.8 therefore met the criteria of average variance extracted showing reliability.

- **Composite reliability (CR)**

Composite reliability (CR) is the result when true reliability is being estimated using structural equation modelling (Peterson & Kim, 2013:194). Ab Hamid, Sami and Sidek (2017:3) describe it as another common measurement used for internal consistency; it measures the reliability based on the interrelationship of the observed items' variables. Composite reliability values depict the degree to which the construct indicators indicate the latent construct (Lin, 2007:436). The CR values should be > 0.7 (Fornell & Larcker, 1981; Pallant, 2016:6). From Table 6.8 above, all

constructs had a CR that was equal to or above 0.7. This confirms that composite reliability was achieved by this study.

- **Cronbach's alpha (α)**

Wiid and Diggines (2015:238) state that Cronbach's alpha is the most effective measurement of reliability. Reliability confirms the internal consistency of scales, which involves correlating the responses to questions in the questionnaire with each other (Saunders et al., 2016:451). In order to determine reliability and internal consistency, the CR and Cronbach's alpha values should be > 0.7 (Fornell & Larcker, 1981; Pallant, 2016:6). A high Cronbach's alpha score is an indication of the high reliability rate of the questionnaire (Clow & James, 2014:268). Although it is advised that researchers be cautious of values below 0.60 (Zikmund & Babin, 2013:257), Taber (2018:1278) argues that, in the social sciences (as is the case with this study), values between 0.5 and 0.9 can be considered satisfactory when conducting Cronbach's alpha test.

It can be noted from Table 6.8 that all the Cronbach's alpha values for factors were above 0.67, indicating that they were reliable and could be retained.

6.8 ASSESSMENT OF VALIDITY OF THE MEASUREMENT MODEL

It should be noted that, although the scale items in the measurement instrument were adapted from previous studies (refer to Chapter 5, section 5.3.6.2), it was still vital to determine the validity of the measurement scale items of the study (Knekta et al., 2019:3). This section discusses in detail the validity of the measurement model.

- ***Content or face validity***

As previously mentioned in section 5.3.10.1.1 of chapter 5, content validity was achieved by adopting scale and scale items from previously tested empirical studies. Face validity, which is a sub-category of content validity, was achieved by seeking the opinion of experts and consulting a statistician from STATKON, all of whom confirmed the content and face validity to be satisfactory.

- ***Convergent validity (CV)***

CV is assessed through factor loadings and average variance extracted (AVE), which should be > 0.5 (Hair et al., 2010:710). However, Fornell and Larcker (1981) argue that, as long as the Cronbach's alpha scores for items below 0.5 are above 0.6, an AVE of 0.4 can be accepted. This opinion was supported by Knekta et al. (2019:15), who stated that it is important to consider the alignment between the item and the hypothesised construct before eliminating the item; and if a

researcher can argue from a theoretical basis for its inclusion, then it can be included. As noted in Table 6.8 above, network quality had an AVE of 0.452 and a Cronbach's alpha of 0.697; but these scores are supported and backed by the literature (refer to Chapter 4, section 4.2.3) - that network quality is vital when it comes to mobile telecommunications services, as it is a focal point for customer satisfaction and the retention of customers (Hossain et al., 2017:923). The initial customer service variable (refer to Chapter 4, section 4.2.1) that loaded into customer service access (AVE:0.400 and Cronbach's α: 0.679) and customer care (AVE:0.472 and Cronbach's α: 0.702) has been supported by the literature as a distinguishing factor that leads to customer satisfaction and loyalty (Adebiyi et al., 2016a:8; Grigoriou et al., 2018:13). Moreover, deleting the items would be adverse to the model identification in SEM, which is not recommended (Iglesias, Singh & Batista-Foguet, 2011:577). It can also be argued that, if at least two measures from among the AVE, CR, and Cronbach's alpha are within the usual boundaries, then convergent validity is obtained (Fornell & Larcker, 1981:46; Lam, 2012:1332), which was the case in this study. This means that the scale statement items converged well on the constructs that they were required to measure. Therefore, this study confirms the existence of convergent validity in the questionnaire.

- ***Discriminant validity***

Discriminant validity is confirmed by assessing the square root (√) of AVE and the presence of significant cross-loadings. The square root of an AVE should be greater than the correlations between the constructs, and the model should not contain a high number of cross-loadings (Fornell & Larcker, 1981:45-46). Table 6.9 presents the discriminant validity, where each of the values in bold should be higher than the correlation values.

Table 6. 9: Component Correlation Matrix (Discriminant validity)

	NQ	OSQ	PF	CA	CC	SAT	LOY	TRU	COM	LSC
NQ	**0.672**									
OSQ	0.599	**0.713**								
PF	0.582	0.524	**0.773**							
CA	0.503	0.567	0.472	**0.632**						
CC	0.484	0.585	0.464	0.488	**0.687**					
SAT	0.737*	0.543	0.692	0.494	0.536	**0.781**				
LOY	0.587	0.558	0.637	0.498	0.543	0.651	**0.806**			
TRU	0.658	0.639	0.670	0.523	0.503	0.694	0.736	**0.785**		
COM	0.447	0.469	0.461	0.354	0.413	0.509	0.715	0.577	**0.811**	
LSC	0.268	0.264	0.259	0.195	0.170	0.288	0.423	0.352	0.498	**0.710**

Note: *NQ=network quality, OSQ=overall service quality, PF=price fairness, CA=customer service access, CC=customer care, SAT=satisfaction, LOY=loyalty, TRU=trust, COM=commitment, LSC=low switching costs. The Diagonal elements are the square root (√) of AVE, and the off-diagonal variables are the inter-construct correlations.*

It can be seen from Table 6.9 that the square roots of AVE for the constructs were all higher than the correlation estimates, except for the relationship between network quality and satisfaction (√AVE=0.672, r=0.737). Viswanathan (2011:80) argues that, if there is a loading that is higher but it makes sense logically and is backed by the literature (refer to Chapter 4, section 4.2.3), then validity is still established (Knekta et al., 2019:11). According to Jere and Mukupa (2018:122), network quality is an important prerequisite for customer satisfaction, as it relates to ensuring the mobile service's availability that customers expect. This makes it an important element that customers use to assess mobile service quality (Jere & Mukupa, 2018:122). When network quality is consistently poor, customers will complain and feel dissatisfied, which would prompt them to avoid using the goods or services again in the future. This is also supported by the expectation disconfirmation theory (refer to Chapter 3, section 3.3.6). Previous research, such as Thaichon et al. (2016:54), Nwakanma et al. (2018:9), and Dahal (2019:137) has also empirically confirmed and statistically supported the idea that network quality and customer satisfaction are strongly related.

The results from Table 6.7, Table 6.8 and Table 6.9 therefore indicate that the criteria for reliability and validity were met and exceeded in this study.

The next section tabulates and discusses the variation in mean scores of all the remaining factors influencing customer satisfaction and loyalty in the Nigerian mobile telecommunications industry.

6.9 THE MEAN AND STANDARD DEVIATION SCORES FOR CONSTRUCTS IN THE CONCEPTUAL MODEL AFTER FACTOR ANALYSIS

The overall mean of all statements describing each factor is important for understanding the customers' perceptions and expectations that lead to customer satisfaction. When customers are satisfied, they reciprocate with relationship intentions that lead to customer loyalty. Although the mean and standard deviation for all the items in the study were discussed in Section 6.5, this needs to be reconsidered after removing items from the EFA. Table 6.10 therefore shows the overall mean and standard deviation scores for the constructs in the conceptual model after factor analysis, and the specific mean scores per factor as retained for the CFA and the structural equation model discussed in Section 6.10.

Table 6. 10: The mean and standard deviation scores for constructs in the conceptual model after factor analysis

Items / Factor	Mean	Standard deviation
Network quality (NQ)		
B20	3.71	1.048
B21	3.51	1.099
B33	3.19	1.250
Overall network quality level	**3.47**	**1.132**
Overall service quality (OSQ)		
B10	3.21	1.115
B27	3.70	1.064
B28	3.19	1.015
B30	3.37	1.018
Overall service quality	**3.37**	**1.053**
Price fairness (PF)		
B12	2.88	1.232
B14	2.48	1.096
B15	3.09	1.056

Items / Factor	Mean	Standard deviation
B16	3.27	1.041
Overall price fairness	**2.93**	**1.106**
Customer service access (CSA)		
B6	3.52	1.099
B8	3.65	1.096
B9	2.96	1.160
B26	2.78	1.065
Overall customer service access	**3.23**	**1.105**
Customer care (CC)		
B1	3.39	0.969
B4	3.34	0.995
B5	3.41	1.074
Overall customer care	**3.38**	**1.013**
Satisfaction (SAT)		
C1	3.12	1.070
C4	3.39	1.197
C5	3.41	0.983
Overall satisfaction	**3.31**	**1.083**
Loyalty (LOY)		
C22	3.51	1.059
C23	3.39	1.067
C24	3.48	1.000
C25	3.73	0.962
C26	3.66	1.087
C27	3.51	1.028
Overall loyalty	**3.55**	**1.034**
Trust (TRU)		
C6	3.28	1.070
C7	3.38	1.069
C11	3.26	1.052
Overall trust	**3.31**	**1.064**

Items / Factors	Mean	Standard deviation
Commitment (COM)		
C17	2.98	1.384
C18	3.40	1.147
C19	3.26	1.185
C20	3.39	1.311
Overall commitment	**3.26**	**1.257**
Low switching costs (LSC)		
C12	2.68	1.347
C14	3.08	1.353
C15	2.85	1.296
Overall low switching costs	**2.87**	**1.332**

Based on the data presented in Table 6.10, from the factors that influence customer satisfaction (network quality, overall service quality, price fairness, customer service access, and customer care), network quality recorded the highest mean score (mean = 3.47, previous mean = 3.56), indicating that respondents neither agreed nor disagreed with most statements measuring network quality, but that they leant more towards agreement. Price fairness received the lowest mean score (mean = 2.93, previous mean = 2.91). The standard deviation values ranged between 1.013 and 1.132, indicating a degree of variance in the responses.

- **Main finding 46:** Respondents indicated that the factor with the highest level of agreement was network quality (mean = 3.47 and standard deviation = 1.132).
- **Main finding 47:** Respondents indicated that the factor with the lowest level of agreement was price fairness (mean = 2.93 and standard deviation = 1.106).

Based on the data presented in Table 6.10 from customer satisfaction, relationship intention variables (trust and commitment), low switching costs and customer loyalty - customer loyalty had the highest mean score (mean = 3.55, previous mean = 3.55) or level of agreement for each of the statement items asked, while low switching costs received the lowest mean score (mean = 2.87, previous mean = 3.09) or level of agreement for the statements posed.

- **Main finding 48:** Respondents indicated that the factor with the highest level of agreement was customer loyalty (mean = 3.55 and standard deviation = 1.034).

- **Main finding 49:** Respondents indicated that the factor with the lowest level of agreement was low switching costs (mean = 2.87 and standard deviation = 1.332).

Since the reliability and validity of the scale items included in this study were found to be satisfactory, it was acceptable to conduct the SEM analysis and hypotheses testing. The next section discusses the SEM analysis and hypotheses testing proposed for this study.

6.10 STRUCTURAL EQUATION MODELLING (SEM) AND HYPOTHESES TESTING

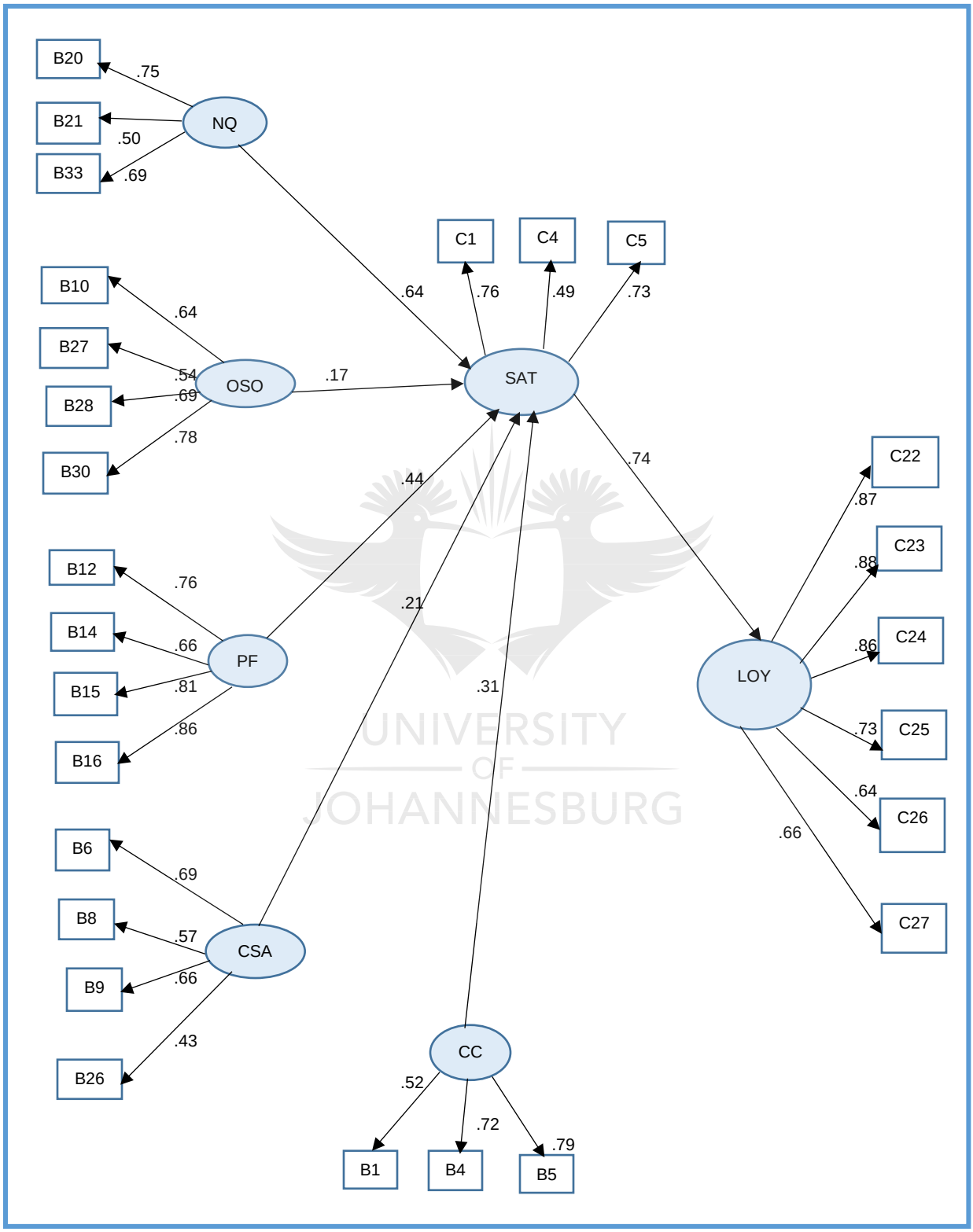
As previously mentioned in Chapter 5, section 5.3.10.3, SEM was the main statistical analytical technique and hypothesis-testing tool used to examine the relationship among the constructs, and to validate the structural model in this study further through a CFA procedure (Hair et al., 2017:11; Shaheen et al., 2017:133; Hult et al., 2018). The evaluation of structural equation models is a complex conceptual and empirical activity that requires the conjunction of at least three activities to ensure reasonable success (Bagozzi, 1981:375). The assessment of SEM therefore involves theoretical, methodological and statistical analyses (Bagozzi, 1981:375). This enables the researcher to analyse the impact of each of the independent variables on the dependent variables, and to build an integrated model to manage them effectively (Malhotra, 2010:691; Field, 2013:666; Saroha & Diwan, 2020:666). These relationships involve determining whether a relationship exists between the factors influencing customer satisfaction (network quality, overall service quality, price fairness, customer service access, and customer care) and satisfaction; determing whether satisfaction leads to customer loyalty; and evaluating which factor within customer satisfaction has the strongest influence on the perception and expectation of customers.

As noted in Chapter 5, section 5.3.10.3, SEM was selected for this study to determine whether to accept or reject the hypotheses. The sections that follow include the results of the measurement model using the CFA method, the results of testing the structural model hypotheses, and a review of the hypotheses in order to validate the research hypotheses and attain the secondary objectives of this study.

6.10.1 Structural equation modelling (SEM) (measurement model assessment)

The EFA and CFA were explained in sections 6.6.3 and 6.6.4, where it was shown that EFA and CFA were fully carried out to understand the structure of the constructs proposed in the conceptual model, and where they were confirmed as satisfactory. In the sections that follow, the results of the testing and analysing of the measurement model results through CFA are explained. This discussion centres on the path coefficients and hypotheses testing of the model.

Figure 6. 1: The measurement model



Note: *NQ=network quality, OSQ=overall service quality, PF=price fairness, CSA=customer service access, CC=customer care, SAT=satisfaction, LOY=loyalty*

6.10.2 Structural equation modelling (SEM) model fit

Like the measurement model presented in section 6.6.4 (refer to Table 6.7), an evaluation of the SEM model's fit was conducted using the CFA procedure. Barrett (2007:816) and Baek, Choo, Wei and Yoon (2020:656) explain that the use of multiple fit indices is encouraged to provide a more holistic view of goodness of fit. Table 6.11 summarises the results of the model fit.

Table 6. 11: Summary of the model fit results for SEM

Selected indices	Acceptable fit	Model fit values
CMIN - Normed Chi-Square (x^2/df)	(x^2/df) ≤ 3; good fit < 5 sometimes permissible (Hair et al., 2010:665-669).	2.735
RMR - AGFI	≥ 0.8 good fit (Hair et al., 2010:665-669).	0.833
Baseline comparisons - CFI	CFI > 0.90 (moderate fit) and 0.95 (great fit) (Hair et al., 2010:665-669).	0.906
Baseline comparisons - TLI rho2	TLI > 0.90 good fit (Hair et al., 2010:665-669).	0.893
RMSEA - RMSEA	RMSEA < 0.05 good; between 0.05 and 0.10 acceptable (Hair et al., 2010:665-669).	0.067

Considering all the model fit values in Table 6.11, this study has a traditional to good model fit according to the benchmark used by Hair et al. (2010:665-669). Here, the Normed Chi-Square (2.735) is less than the recommended value of 3; the AGFI (0.833) is higher than 0.8; the RMSEA (0.067) is within the acceptable range of between 0.05 and 0.10 (a lower score for RMSEA signals a better fit); the TLI (0.893), which should preferably generate a score higher than 0.90, is still within an acceptable range; and the CFI (0.906) is within the recommended acceptable value of > 0.90 (Hair et al., 2010:665-669).

6.10.3 Path coefficients

The SEM takes the CFA a step further by testing the direct relationship between the constructs (Pallant, 2010:181; Zainudin, 2015; Aktepe et al., 2015:98) (as shown in Figure 6.1). The path

coefficients therefore ascertain whether the direct relationships are statistically significant; if they are not statistically significant, then the proposed hypotheses will be rejected (Hair et al., 2017:11). Table 6.12 presents the path coefficients, showing the relationship between the factors influencing customer satisfaction and satisfaction to loyalty.

Table 6. 12: The path coefficients showing the relationship between factors influencing customer satisfaction and satisfaction to loyalty

Path			Standardised	Unstandardised	S.E.	C.R.	*Probability value (p)*
Satisfaction	←	Network quality	0.639	0.547	0.081	6.764	<0.001
	←	Overall service quality	0.166	0.167	0.078	-2.126	0.033
	←	Price fairness	0.439	0.363	0.063	5.796	<0.001
	←	Customer service Access	0.210	0.333	0.124	2.690	0.007
	←	Customer Care	0.306	0.264	0.062	4.259	<0.001
Loyalty	←	Satisfaction	0.742	0.863	0.064	13.505	<0.001

Table 6.12 presents the results of the path coefficients, and shows all the factors influencing customer satisfaction. It is noted that not all the estimated parameters exerted a high predictive and significant influence on customer satisfaction. Network quality had the strongest standardised percentage (64%), followed by price fairness (44%), customer care (31%), and customer service access (21%). Overall service quality exerted the weakest significance (17%), which was still acceptable (Hair et al., 2010:677). Customer satisfaction also had a very strong predictive relationship with customer loyalty (74%).

To check the statistical significance of the paths of the constructs, the probability (*p*) value should be less than 0.05. This is because the study attempted to achieve a 95% confidence level to assure greater certainty (Malhotra, 2010:705; Wiid & Diggines, 2015:265). Therefore, from Table 6.12, it can be deduced that all the factors leading to customer satisfaction were statistically significant, and so all the hypotheses could be accepted. Customer satisfaction also showed a

probability (*p*) value (<0.001) that was less than 0.05, and so the hypothesis linking it to customer loyalty was also accepted.

The discussion below considers each hypothesis tested in the SEM in more detail.

H1: *There is a direct and positive relationship between customer service and customer satisfaction in the Nigerian mobile telecommunications industry*

Hypothesis H1 is split into H1a and H1b, as explained in section 6.7.1.1

- **Main finding 50:** H1a*: **There is a direct and positive relationship between customer care and customer satisfaction in the Nigerian mobile telecommunications industry*** (*p<0.001, β=0.306).* Therefore the hypothesis was accepted.

- **Main finding 51:** H1b: ***There is a direct and positive relationship between customer service access and customer satisfaction in the Nigerian mobile telecommunications industry*** (*p≤0.007, β=0.210).* Therefore the hypothesis was accepted.

- **Main finding 52:** H2: ***There is a direct and positive relationship between price fairness and customer satisfaction in the mobile Nigerian telecommunications industry*** (*p<0.001, β=0.439).* Therefore the hypothesis was accepted.

- **Main finding 53:** H3: ***There is a direct and positive relationship between network quality and customer satisfaction in the Nigerian mobile telecommunications industry*** (*p<0.001, β=0.639).* Therefore the hypothesis was accepted.

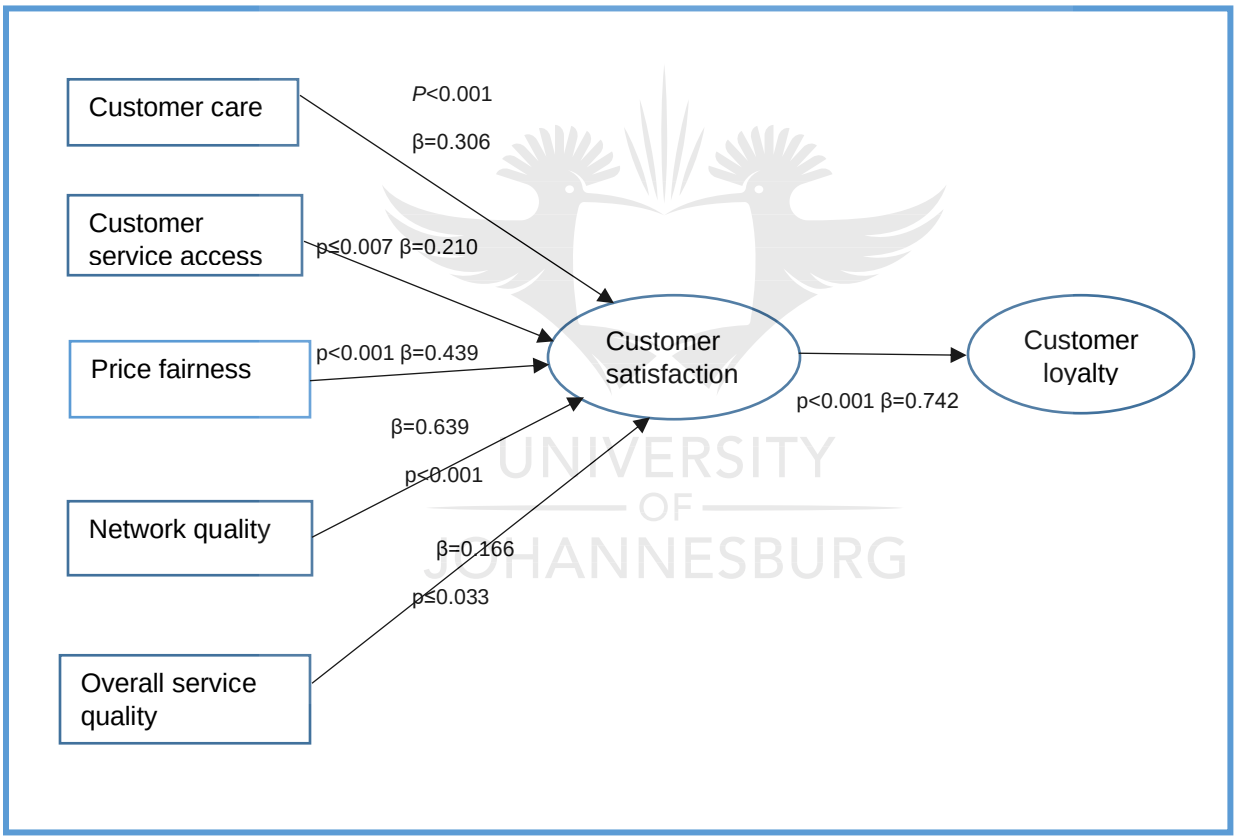
- **Main finding 54:** H4: ***There is a direct and positive relationship between diversity of products and customer satisfaction in the Nigerian mobile telecommunications industry****.* This hypothesis was rejected, as it was removed at the factor analysis stage.

As previously explained in section 6.6.3.1, diversity of products was removed because it had less than 0.4 communality with only two items left after other items had loaded on different factors. Therefore the hypothesis was rejected

- **Main finding 55:** H5: ***There is a direct and positive relationship between overall service quality and customer satisfaction in the Nigerian mobile telecommunications industry*** (*p≤0.033, β=0.166).* Therefore the hypothesis was accepted.

- **Main finding 56:** H9: ***There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry*** (*p<0.001, β=0.742).* Therefore the hypothesis was accepted.

Figure 6. 2: The path coefficients and beta value of the refined model, showing the relationship between factors influencing customer satisfaction to satisfaction, and satisfaction to loyalty, after the confirmation or rejection of hypotheses.



Note: ⟶ indicates a significant path ⟶ indicates a non-significant path

6.10.3.1 Summary of research hypotheses

A summary of the research hypotheses and outcomes of the factors influencing customer satisfaction to satisfaction, and satisfaction to loyalty, is summarised in Table 6.13. The outcomes of the hypotheses test *p* values and beta values are also included in the table.

Table 6. 13: Summary of research hypotheses and outcomes

Research objective	Hypothesis	*p* values	Beta values	Outcome
To determine whether customer service, price fairness, network quality, diversity of products, and overall service quality lead to customer satisfaction.	***H1a:*** There is a direct and positive relationship between customer care and customer satisfaction in the Nigerian mobile telecommunications industry	*<0.001*	*0.306*	**Accepted**
	H1b: There is a direct and positive relationship between customer service access and customer satisfaction in the Nigerian mobile telecommunications industry	*≤0.007*	*0.210*	**Accepted**
	H2: There is a direct and positive relationship between price fairness and customer satisfaction in the mobile Nigerian telecommunications industry	*<0.001*	*0.439*	**Accepted**
	H3: There is a direct and positive relationship between network quality and customer satisfaction in the Nigerian mobile telecommunications industry	*<0.001*	*0.639*	**Accepted**
	H4: There is a direct and positive relationship between diversity of products and customer satisfaction in the Nigerian mobile telecommunications industry	**N/A**	**N/A**	**Removed at factor analysis stage**
	H5: There is a direct and positive relationship between overall service quality and customer satisfaction in the Nigerian mobile telecommunications industry	*≤0.033*	*0.166*	**Accepted**

	H9: There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry	*<0.001*	*0.742*	**Accepted**

From the summary presented in Table 6.13 above, the following can be deduced that:

- **Main finding 57:** Network quality was the most significant predictor (64%) of customer satisfaction in the Nigerian mobile telecommunications industry
- **Main finding 58:** Overall service quality exerted the weakest significance (17%) for customer satisfaction in the Nigerian mobile telecommunications industry
- **Main finding 59:** Customer satisfaction had a very strong predictive relationship with customer loyalty (74%) in the Nigerian mobile telecommunications industry

6.10.4 Mediation

As indicated in Chapter 1, section 1.7 hypotheses H6, H7, and H8 aimed to determine whether there was a mediation effect between satisfaction, trust, commitment, low switching costs, and loyalty. Although the SEM found that there was a significant relationship between satisfaction and loyalty, this study still needed to determine whether the strength of this relationship was mediated through the other three factors.

'Mediation' explains the different interrelationships among constructs, in which an initial variable influences the outcome of another variable through a mediating variable (MacKinnon, Kisbu-Sakarya & Gottschall, 2013:338; Demming, Jahn & Boztug, 2017:77). After SEM had been conducted, the relationships between the mediators and their hypotheses were tested and confirmed or rejected. This process was carried out using the PROCESS version 3.5 add-on for SPSS Model 4, which was selected because mediation was to be calculated. Here, customer loyalty was the dependent variable, customer satisfaction was the independent variable, and the mediators were trust (TRU_ov), commitment (COM_ov), and low switching costs (LSC_ov). It is noteworthy that the effect of the independent variable on the dependent variable shrank, compared with the results of the SEM when the mediators were added to the model (Baron & Kenny, 1986:1176). Table 6.14 shows a summary of the direct relationships between customer satisfaction and the mediating variables. The sections that follow then explain and confirm the proposed hypotheses.

Table 6. 14: Summary of the direct relationships between customer satisfaction and the mediating variables

Variable	*p*	R (β)	LLCI	ULCI
Trust	0.00	0.6944	0.6079	0.7482
Commitment	0.00	0.5088	0.4896	0.6886
Low switching costs	0.00	0.2885	-0.3265	-0.1640

- **Trust**

From Table 6.14, the *p* value is 0.00, which is less than 0.05; and R (**β**) is 0.6944, which confirms that statistically customer satisfaction is a predictor of trust, and so the hypothesis can be accepted. To confirm this hypothesis further, the values of the lower level confidence interval (LLCI) and upper level confidence interval (ULCI) must not cross 0 for it to be accepted. The values presented in Table 6.14 show the LLCI at 0.6079 and ULCI at 0.7482, with both values higher than 0. The significance of this relationship is in harmony with the theoretical literature evidence provided in section 4.7 of Chapter 4. The results of this study support the work of Youcef et al. (2015:5) and Van Tonder and Petzer (2018:965), who found that customer satisfaction had a significant impact on trust. Therefore this hypothesis was accepted.

- **Main finding 60:** H6***: There is a direct and positive relationship between customer satisfaction and trust in the Nigerian mobile telecommunications industry*** *(p* ≤0.00, β=0.6944)

- **Commitment**

From Table 6.14, the p value is 0.00, which is less than 0.05, and R (**β**) is 0.5088, which confirms statistically that customer satisfaction is a predictor of commitment, and so the hypothesis can be accepted. To confirm this hypothesis further, the values of the LLCI and ULCI must not cross 0 for it to be accepted. The values presented in Table 6.14 show the LLCI at 0.4896 and ULCI at 0.6886, with both values higher than 0. The significance of this relationship is in harmony with the theoretical literature evidence provided in section 4.7 of Chapter 4. The results of this study support the work of Youcef et al. (2015:5) and Van Tonder and Petzer (2018:965), who found that

customer satisfaction had a significant impact on commitment. Therefore this hypothesis was accepted.

- **Main finding 61:** H7***: There is a direct and positive relationship between customer satisfaction and commitment in the Nigerian mobile telecommunications industry*** *(p* ≤0.00, β=0.5088)

- **Low switching costs**

From Table 6.14, the p value is 0.00, which is less than 0.05, and R (**β**) is 0.2885, with the table also showing the LLCI at -0.3265 and ULCI at -0.1640, with both negative values lower than 0. Therefore, statistically, there is a negative relationship between customer satisfaction and low switching costs. This hypothesis was thus accepted, but considered negative.

- **Main finding 62:** H8**: *There is a direct but negative relationship between customer satisfaction and low switching costs in the Nigerian mobile telecommunications industry*** *(p* ≤0.00, β=0.2885)

- **Customer loyalty**

To determine whether customer loyalty has a predictor among the mediating variables, the presence of a predictor needed to be determined. Table 6.15 presents the customer loyalty predictor calculation data.

Table 6. 15: Customer loyalty predictor calculation data

	R(**β**)	R-sq	MSE	F	Fd1	Df2	
P	0.8290	0.6873	0.2371	211.5575	4.0000	385.0000	0.00
00							

From the data presented in Table 6.15, the p value is 0.00 and R (**β**) is 0.8290, which indicates the presence of a strong predictor in the model. The indication of the presence of a strong predictor signals that one of the mediating factors is a significant determinant of customer loyalty. Table 6.16 presents the summary of the direct relationship between customer satisfaction, the mediators, and customer loyalty.

Table 6. 16: Summary of the direct relationship between customer satisfaction, the mediators, and customer loyalty

	coeff **(β)**	se	t	p	LLCI	ULCI
constant	0.9280	0.1616	5.7434	0.000	0.6103	1.2457
SAT_ov	0.1713	0.0374	4.5775	0.000	0.0977	0.2449
TRU_ov	0.3516	0.0405	8.6802	0.000	0.2720	0.4313
COM_ov	0.3079	0.0308	10.0005	0.000	0.2474	0.3684
LSC_ov	-0.0530	0.0360	-1.4704	0.1423	-0.1239	0.0179

- **Direct relationship between customer satisfaction and customer loyalty**

As noted in the introductory part of this section, it can be seen from the mediating analysis summary of Table 6.16 that customer satisfaction's impact on customer loyalty has shrunk from 0.742 (refer to section 6.10.3, Table 6.12) to 0.1713, which is still greater than 0.00. This confirms statistically that customer satisfaction has a direct relationship with customer loyalty; so, the hypothesis can be accepted. To confirm this hypothesis further, the values of the LLCI and ULCI must not cross 0 for it to be accepted. The values presented in Table 6.16 show the LLCI at 0.0977 and ULCI at 0.2449, with both values higher than 0. The significance of this relationship is in harmony with the theoretical literature evidence provided in section 4.9 of Chapter 4. The results of this study support the work of Mahmoud et al. (2018) and Aslam et al. (2018:179), who found that customer satisfaction had a significant impact on customer loyalty. Therefore this hypothesis was re-confirmed and accepted (refer to section 6.10.3).

- **Main finding 63:** H9: ***There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry*** (*p≤0.000, β=0.1713)*

- **Direct relationship between trust and customer loyalty**

From Table 6.16 it can be noted that the p value of trust was 0.00, which is less than 0.05, and the **β** value was 0.3516, which confirms that, statistically, trust has a direct impact on customer loyalty; and so the hypothesis can be accepted. The values presented in Table 6.16 also show the LLCI at 0.2720 and ULCI at 0.4313, with both values higher than 0. The significance of this relationship is in harmony with the theoretical literature evidence provided in section 4.9 of Chapter 4. The results of this study support the work of Madjid et al. (2013:59) who found that trust had a significant impact on customer loyalty. Therefore this hypothesis was accepted.

- **Main finding 64:** H10***: There is a direct and positive relationship between trust and customer loyalty in the Nigerian mobile telecommunications industry*** *(p* ≤0.000, β=0.3516)

- **Direct relationship between commitment and customer loyalty**

From Table 6.16 it can be noted that the p value of trust is 0.00, which is less than 0.05, and the **β** value is 0.3079, which confirms that, statistically, even with the inclusion of the mediating variable (customer satisfaction), commitment still has a very good impact on customer loyalty. Therefore the hypothesis was accepted. The values presented in Table 6.16 also show the LLCI at 0.2474 and ULCI at 0.3684, with both values higher than 0, which further confirms the hypothesis. The significance of this relationship is in harmony with the theoretical literature evidence provided in section 4.9 of Chapter 4. The results of this study support the work of Chakiso (2015:59) and Mahmoud et al. (2018), who found that commitment had a significant impact on customer loyalty.

- **Main finding 65:** H11***: There is a direct and positive relationship between commitment and customer loyalty in the Nigerian mobile telecommunications industry*** *(p* ≤0.000, β=0.3079)

- **Direct relationship between low switching costs and customer loyalty**

Table 6.16 shows the p value of low switching costs at 0.1423 and **β** was -0.0530, which shows that statistically it had no impact on customer loyalty. Therefore the hypothesis was rejected. The values presented in Table 6.16 also show the LLCI at -0.1239 and ULCI at 0.0179, with the LLCI value negative, which further confirms the rejection of the hypothesis.

Main finding 66: H12***: There is no statistically significant relationship between low switching costs and customer loyalty in the Nigerian mobile telecommunications industry - Rejected*** *(p* ≥0.1423, β= -0.0530)

- **Indirect effect(s) of customer satisfaction on customer loyalty**

As previously explained in Chapter 4, section 4.7, and as argued by some studies (Oghojafor et al., 2014:74, Ogungbade, 2015:275; Kaur & Soch, 2018:365), customer satisfaction alone is not enough to attain customer loyalty; rather, it works through mediators, although it is an important

factor on its own. Table 6.17 shows the indirect effects of customer satisfaction on customer loyalty.

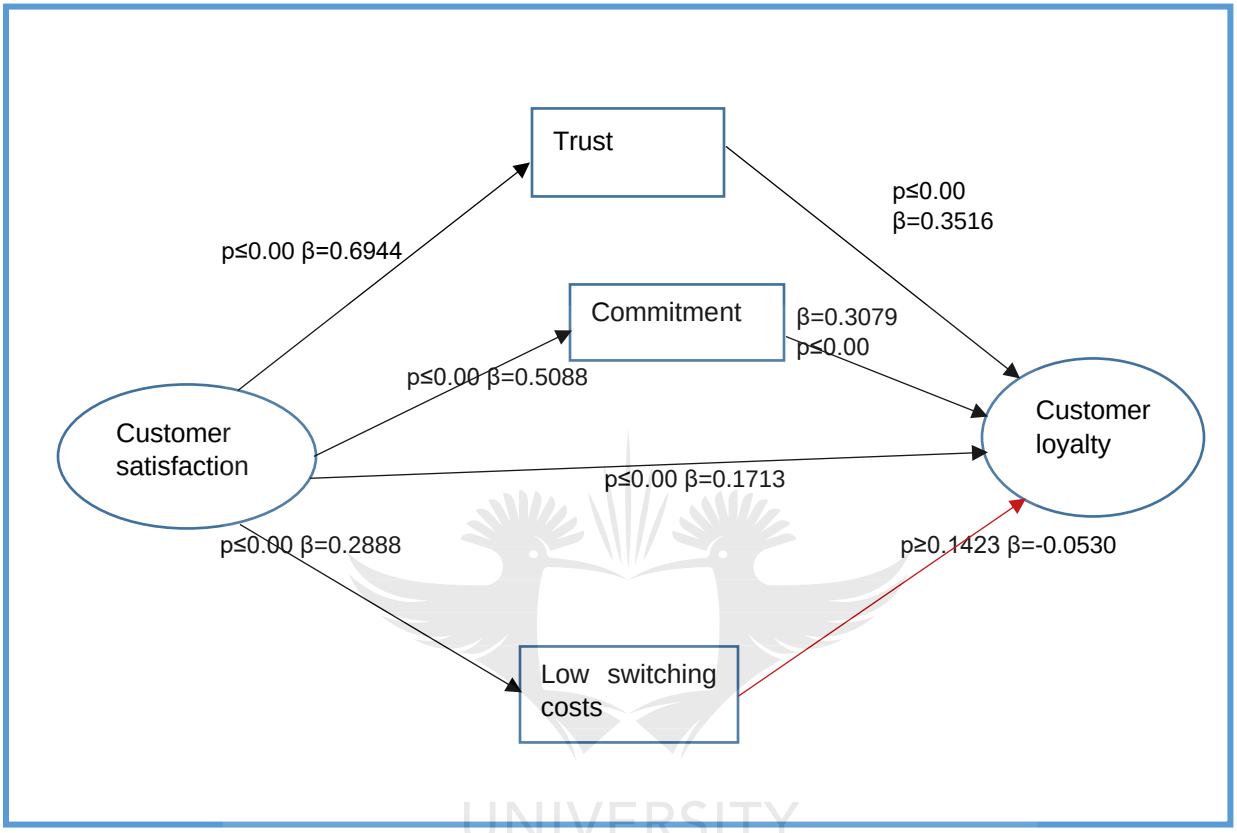
Table 6. 17: The indirect effects of customer satisfaction on customer loyalty

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	0.4328	0.0406	0.3531	0.5129
TRU_ov	0.2384	0.0347	0.1717	0.3059
COM_ov	0.1814	0.0257	0.1319	0.2322
LSC_ov	0.0130	0.0099	-0.0040	0.0344

Based on the data presented in Table 6.17, it was deduced that, when the relationship between customer loyalty and customer satisfaction was mediated through trust, commitment, and low switching costs, trust (0.2384) and commitment (0.1814) were the highest predictors of customer loyalty.

- **Main finding 67:** Trust and commitment were the highest predictors of customer loyalty when mediated through customer satisfaction.
- **Main finding 68:** Trust had a larger effect, indicating that the customer might be satisfied, but the more that customer trusts the network provider, the more loyal the customer will be (that is, compared with commitment).
- **Main finding 69:** Trust and commitment are higher predictors of customer loyalty when compared with customer satisfaction and low switching costs.

Figure 6. 3: The path coefficients and beta values of the refined model, showing the direct and indirect impacts and relationships between customer satisfaction, trust, commitment, low switching costs, and customer loyalty, after the confirmation of the hypotheses.



Note: ——→ indicates a significant path ——→ indicates a non-significant path

6.10.4.1 Summary of statistically significant relationships after the mediation process

A summary of the research objective, the hypotheses, and the outcomes of the statistically significant relationships among the constructs after the mediation process is given in Table 6.18. The hypotheses' test *p* values and beta values are also included in Table 6.18.

Table 6. 18: Summary of research hypotheses of statistically significant relationships after the mediation process

Research objectives	Hypothesis	*p* values	Beta values	Outcome
To determine whether customer satisfaction leads to trust, commitment, low switching and customer loyalty.	**H6*:*** There is a direct and positive relationship between customer satisfaction and trust in the Nigerian mobile telecommunications industry	≤0.00	0.6944	**Accepted**
	H7*:* There is a direct and positive relationship between customer satisfaction and commitment in the Nigerian mobile telecommunications industry	≤0.00	0.5088	**Accepted**
	H8: There is a direct but negative relationship between customer satisfaction and low switching costs in the Nigerian mobile telecommunications industry	≤0.00	0.2885	**Accepted**
	H9: There is a direct and positive relationship between customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry	≤0.00	0.1713	**Accepted**
To examine the relationship link between trust, commitment and low switching costs as mediators between customer satisfaction and customer loyalty.	**H10*:*** There is a direct and positive relationship between trust and customer loyalty in the Nigerian mobile telecommunications industry	≤0.00	0.3516	**Accepted**
	H11*:* There is a direct and positive relationship between commitment and customer loyalty in the Nigerian mobile telecommunications industry	≤0.00	0.3079	**Accepted**
	H12*:* There is a direct and positive relationship between low switching costs and customer loyalty in the Nigerian mobile telecommunications industry	≥0.1423	-0.0530	**Rejected**

6.11 FINAL SUMMARY OF SECONDARY OBJECTIVES, HYPOTHESES AND MAIN RESULTS OF THE STUDY

Table 6.19 presents a summary of the secondary objectives, hypotheses, and main findings (indicated by their numbers) of the study.

Table 6. 19: Final summary of secondary objectives, hypotheses, and main results of the study

Secondary objectives	Hypotheses	Hypotheses results	Main findings (numbers)
To determine whether customer service, price fairness, network quality, diversity of products, and overall service quality lead to customer satisfaction.	H_{1a}	Accepted	50
	H_{1b}	Accepted	51
	H_2	Accepted	52
	H_3	Accepted	53
	H_4	Removed at factor analysis stage	54
	H_5	Accepted	55
To determine whether customer satisfaction leads to trust, commitment, low switching, and customer loyalty.	H_6	Accepted	60
	H_7	Accepted	61
	H_8	Accepted	62
	H_9	Accepted	56 & 63
To examine the relationship link between trust, commitment, and low switching costs as mediators between customer satisfaction and customer loyalty.	H_{10}	Accepted	64
	H_{11}	Accepted	65
	H_{12}	Rejected	66

From Table 6.19 it is understood that customer service should not be seen just as a single variable, as previous studies by Jere and Mukupa (2018:123), Nekmahmud and Rahman (2018:359), and Dey et al. (2020:7) have done, rather it should be considered and measured from the aspects of both customer service access and customer care, as was discovered by this study. Diversity of products, as mentioned earlier, had only two items and a communality value less than 0.4, and so the relevant hypothesis was rejected (refer to section 6.10.3). Network quality was confirmed to have the highest predictor significant influence on customer satisfaction. This study also discovered that the strength of the relationship between loyalty and satisfaction was mediated by trust and commitment but not by low switching costs. It was also confirmed in this

study that trust and commitment were higher predictors of customer loyalty compared with customer satisfaction.

6.12 CONCLUSION

Chapter 6 presented and broadly discussed the results from the analysis of the data collected in the study. The chapter began with a recapitulation of the study's objectives and hypotheses, and then discussed the realisation rate. The next section presented the demographic profile and cell phone patronage behaviour of the respondents, using frequencies and percentages. The chapter then provided a discussion and the results of a descriptive analysis of all the constructs adopted for the study (customer service, price fairness, network quality, diversity of products, overall service quality, customer satisfaction, trust, commitment, low switching costs and customer loyalty). The section after that discussed the factor analysis, normality, and determining the suitability of the data using sample size, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. This process established that the data was suitable for exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). In addition, the validity of the measurement instrument that confirmed which construct was valid or not valid was presented. The EFA factor testing for validity confirmed the invalidity of diversity of products and the splitting of the customer service factor into two new constructs, customer service access and customer care.

CFA was then conducted on the new and remaining constructs. Subsequent sections checked the assessment of CFA model fit using AMOS, and the reliability of the measuring instrument using Cronbach's alpha, presented in section 6.7, with Table 6.8 showing the AVE and composite reliability. This was followed by a detailed discussion of the assessment of validity measure, structural equation modelling (SEM), and hypotheses testing. This section ushered in the SEM measurement model assessment, SEM model fit, and path coefficients, which revealed which hypotheses were accepted or rejected. Based on the results from the SEM process, hypotheses H1a, H1b, H2, H3, H5, and H9 were accepted, while H4 was rejected because diversity of products had only two statement items, and its communality value was less than 0.4. After SEM had been conducted, the relationship between the mediators and their hypotheses was tested and confirmed or rejected. This process was carried out using the PROCESS version 3.5 add-on for SPSS Model 4. The results from the mediation process revealed that hypotheses H6, H7, H8, H9, H10, and H11 were confirmed and accepted, while H12 was rejected, as there was no statistically significant relationship between low switching costs and customer loyalty. The chapter

concluded with the presentation of the final summary of the secondary objectives, hypotheses, and main results of the study.

Chapter 7 discusses the research conclusions emanating from the research findings of the data analysis presented in Chapter 6, gives recommendations based on the findings, and discusses the significance of the study. The recommendations are suggested so that mobile telecommunications network providers know what factors influence customer satisfaction and loyalty, and how to resolve some of the challenges facing the industry. The limitations of the study and future research possibilities on this subject area are also discussed.

CHAPTER 7

RESEARCH CONCLUSIONS, RECOMMENDATIONS, AND SIGNIFICANCE OF THE STUDY

7.1 INTRODUCTION

Owing to the fierce competition in the Nigerian telecommunications market (Ogungbade, 2015:270), many mobile network providers are struggling to retain their market share and to keep their customers satisfied and loyal. The mobile telecommunications sector in Nigeria has been troubled by high rates of switching, people owning multiple SIM cards (Oluwafemi & Adebiyi, 2018:103), and constant complaints from dissatisfied customers, especially as the market is reaching saturation point (Izogo, 2016:748). Consumers are in search of a telecommunications provider that can offer good network quality, a variety of products, fair pricing, and access to satisfactory customer service without sacrificing overall service quality (Izogo, 2016:761), all of which would create the opportunity to develop long-term relationships with them. It is noteworthy that the modern consumer is now harder to please, smarter, and more price-conscious, demanding, and sensitive, because there are other service providers with equal or better offers. This has made service providers eager to reconfigure their marketing strategy and to find strategies that would help them to develop long-term relationships with their customers (Tauni et al., 2014:55).

Based on the results from the SEM process in Chapter 6 (refer to section 6.10.3), network quality, overall service quality, price fairness, customer service access, and customer care were confirmed and accepted as influencing customer satisfaction, while the results from the mediation process in Chapter 6 (refer to section 6.10.4) revealed that customer satisfaction influenced trust, commitment, low switching costs and customer loyalty. Trust, commitment, and customer satisfaction were also confirmed and accepted as having a mediated effect on customer loyalty.

The purpose of this chapter, therefore, is to discuss from a theoretical perspective the research conclusions of the data analysis from Chapter 6, give recommendations based on the findings and discuss the significance of the study. This is done in order to investigate and verify the research objectives stated in section 1.4 of Chapter 1. This chapter starts by giving a brief overview of the entire study, which includes the research problem and a summary of the previous chapters. It then discusses each secondary objective in relation to the main findings associated

with it, and empirical recommendations made by the researcher. This is done to ensure that the primary objective of the study to examine the factors that influence customer satisfaction, mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria - is achieved. The chapter will then present the limitations of the study, and conclude with a discussion of future research possibilities in this subject area.

7.2 OVERVIEW OF THE STUDY

Chapter 1 introduced the background to the study. The need for differentiation among mobile telecommunications network providers, the importance of customer-centricity (customer relationship management), and the development of mutually satisfying long-term relationships with key customers in the Nigerian telecommunications industry were emphasised. Chapter 1, sections 1.1 and 1.2 also gave a summary introduction and background to the growth and development of the telecommunications industry globally and in Nigeria. The problem statement, research objectives, and significance of the research were presented in sections 1.3, 1.4, and 1.5, respectively. A preliminary literature review in Chapter 1, section 1.6.1 briefly discussed the theoretical groundings and underpinnings of the study which was social exchange theory, along with relationship marketing theory, customer relationship management theory, service quality theory, expectation disconfirmation theory, and trust commitment theory. The literature review in Chapter 1, section 1.6.2 focused on discussing the adopted factors influencing customer satisfaction (customer service, price fairness, network quality, diversity of products, and overall service quality) and loyalty (customer satisfaction, trust, commitment, and low switching costs) in the mobile telecommunications industry. A conceptual theoretical framework (refer to Chapter 1, section 1.7, Figure 1.1) and hypotheses were then developed to show the illustrated relationship between the factors influencing customer satisfaction, customer satisfaction (the independent variable), trust, commitment, low switching costs (the mediators) and customer loyalty (the dependent variable). The theoretical framework was redesigned in Chapter 6 (refer to section 6.10.3, Figure 6.2 and section 6.10.4, Figure 6.3), based on the results of the data analysis.

Chapter 2 focused on an in-depth discussion of the telecommunications industry, from both a global perspective and its growth and development in sub-Saharan Africa (refer to Chapter 2, sections 2.2 and 2.3 respectively). This was followed by a detailed narration of the evolution of the Nigerian telecommunications industry, its role, the regulatory bodies, the main mobile operators in the country (MTN, GLO, AIRTEL AND 9MOBILE), current trends, and the challenges

faced by the industry. Chapter 2 concluded with a discussion of the future outlook of the sector (refer to Chapter 2, sections 2.4, 2.5, 2.6, 2.7, 2.8 and 2.9 respectively).

Chapters 3 and 4 expanded on the preliminary literature review discussed in Chapter 1, section 1.6. Chapter 3, section 3.2 highlighted and explained the paradigmatic shift in marketing, and how it has transitioned to establishing relationships with customers during the exchange process. Chapter 3, section 3.3 discussed the theoretical groundings: social exchange theory; customer relationship management theory, which is embedded in relationship marketing theory (Payne & Frow, 2006:137; Toyese, 2014:46); followed by trust commitment theory, service quality theory, and expectation disconfirmation theory. Chapter 4, section 4.2 discussed customer service, price fairness, network quality, diversity of products, overall service quality, customer satisfaction, trust, commitment, low switching costs, and customer loyalty, which are factors influencing customer satisfaction and loyalty (adopted from the previous literature, as shown in Chapter 4, section 4.2). Chapter 4, section 4.7 also explained the relationship link between satisfaction, trust, commitment, low switching costs to customer loyalty, and concluded with the conceptual framework and hypotheses in section 4.10.

The research methodology (refer to Chapter 5, section 5.2) covering the research philosophy, research approach, and methodological choice that set the course for an extensive eleven-step marketing research process (adapted from Wiid and Diggines, 2015:41) (refer to section 5.3, Figure 5.2) was comprehensively presented in Chapter 5. The final part of Chapter 5, section 5.4, discussed the ethical considerations adopted by the researcher.

The data analysis and the interpretation of the data collected for the study was discussed in Chapter 6. It began with a brief summary of the various research objectives and hypotheses for the study (refer to Chapter 6, section 6.2). A discussion of the realisation rate, general demographic profile, and mobile network subscribers' behaviour analysis followed (as shown in Chapter 6, sections 6.3 and 6.4 respectively). This led to section 6.5, which presented a detailed analysis of the collected data and the descriptive statistics. Chapter 6 then outlined the factor analysis (exploratory factor analysis and confirmatory factor analysis) procedure, the reliability of the measurement instrument, the assessment of the validity of the measurement model, and the mean and standard deviation scores for the constructs in the conceptual model after the factor analysis (refer to Chapter 6, sections 6.6, 6.7, 6.8 and 6.9 respectively). Section 6.10 gradually winds up Chapter 6 with a discussion of the structural equation modelling (SEM), as well as the results of the mediation process that was done to explore the relationship between the adopted

variables and to test the study's hypothesis. Section 6.11 concludes Chapter 6 by presenting a final summary of the secondary objectives, hypotheses, and main findings.

This chapter (Chapter 7) discusses the research's conclusions and recommendations, and the significance of this study. It begins with an overview of the study, followed by a discussion of each secondary objective in relation to the main findings associated with it, and concludes with empirical recommendations, the limitations of the study, and future research possibilities on the topic.

The next section presents the conclusions and recommendations for each secondary objective of the study. This was aimed at fulfilling the primary objective of examining the factors that influence customer satisfaction mediated by trust, commitment and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria.

7.3 CONCLUSIONS AND RECOMMENDATIONS FOR SECONDARY OBJECTIVES

The main aim of this chapter is to summarise the secondary research objectives and to present recommendations to the management of mobile telecommunications companies in order to help them anticipate and deliver on the factors related to customer satisfaction and loyalty. The next section provides a brief description of the demographic profiling of the respondents in the current study.

7.3.1 Demographic profile of the respondents in the study

Chapter 6, section 6.5 discussed the demographic profile of the respondents who took part in the research. The majority of the respondents were male (53.8%, n =210) and were aged from 18 to 27 (52.6%, n = 205); almost half of the respondents owned two SIM cards (47.9%, n=187). The majority of the mobile network subscribers were MTN users (61.5%, n=240), and most of the respondents had been with their primary network provider for six years or more (63.3%, n=247). The great majority of the respondents spent more money on data subscriptions (84.6%, n=330) than on other mobile services. In respect of their monthly spending on mobile network services, most spent N4100 or more (56.7%, n= 221).

The above results confirmed the discussion of the literature in Chapter 1, section 1.1, which stated that customers are switching to other service providers and possess multiple SIM cards (Izogo, 2016:746). The results of the study indicated that the majority of the respondents were MTN users; this is consistent with the discussion in section 2.6.1 of Chapter 2, which stated that MTN Nigeria has been the largest mobile network operator in the Nigerian telecommunications market since

its launch: it has more than 4,000 corporate branches, 65.2 million subscribers, and 46 million active data users (MTN, 2019:6; NCC, 2019).

The following recommendations are proposed to mobile network providers, based on this studying's findings about the demographic profile of its respondents.

Recommendation 1: Since most of the respondents were aged from 18 to 27 (52.6%, n = 205), mobile network providers in the Nigerian telecommunications industry should not lose sight of targeting this young segment, and should provide captivating and innovative services or products that are peculiar to this technological age (Holicza & Kadëna, 2018:377-378), such as augmented reality options, being able to sync network provider app with wearables such as smartwatches, fitness bracelets, and healthcare monitors, biometric verifications for secure payment, network optimization using AI, and 5G services.

Recommendation 2: Mobile network providers could also develop exclusive apps that can be used to stream videos and podcasts with entertainment, information, documentary, and lifestyle digital content, and partner with relevant content owners and aggregators. Mobile network providers could also offer cheaper data rates and referral bonuses, as most youths want access to Internet and to social media apps. It is worth mentioning that this age bracket is growing rapidly in sub-Saharan Africa and specifically in Nigeria (Amankwah-Amoah et al., 2018:551); so any mobile telecommunications provider that is able to attract the majority of this age segment by providing satisfactory services will also have the added advantage of growing economically and expanding to other regions or countries.

The next section discusses the research objectives and the recommendations arising from them.

7.3.2 Secondary objective 1

To determine whether customer service, price fairness, network quality, diversity of products, and overall service quality lead to customer satisfaction.

The factors influencing customer satisfaction from the original framework (customer service, price fairness, network quality, diversity of products, and overall service quality) were adapted from previous literature studies, as shown in Chapter 1, section 1.8.4 and Chapter 4, section 4.2. The overall mean score for each factor that leads to customer satisfaction was calculated and

discussed in Chapter 6 (section 6.5). Table 6.3 in Chapter 6 (section 6.5.1.6) presents and discusses the overall mean scores, from the highest to the lowest.

7.3.2.1 Network quality

The problem of Network Quality has been a long-standing topic of earnest consideration for the Nigerian Communications Commission (Adediran et al., 2016:22; Oluwafemi & Adebiyi, 2018:102; Isaiah et al., 2019:8). Given the status of the network quality provided by the various telecommunications companies in Nigeria, which face challenges such as voice quality impairment, poor inter-connectivity between different mobile networks, busy signals, high drop call rates, and SMS delivery failures or delays (Adediran et al., 2016:22), especially in rural areas and cities, it was relevant for the current study to measure and understand Network Quality as one of the factors influencing or leading to customer satisfaction (Nwakanma et al., 2018:9; Dahal, 2019:137).

The respondents agreed that the network quality construct was the factor that most influenced satisfaction. It had an overall mean score of 3.56 (1 = 'strongly disagree' and 5 = 'strongly agree') (main finding 16) - which indicated that respondents neither agreed nor disagreed with the statement items measuring their network quality perceptions and expectations. However, the responses tilted more in the direction of agreement. The outcomes of the EFA and CFA (factor analysis) supported hypothesis H3 (β=0.639 p=<0.001). The overall mean score of network quality after the factor analysis process was 3.47 (refer to Chapter 6, section 6.10). This therefore confirmed that the network quality factor had the greatest influence on customer satisfaction (main finding 35). A study by Bakare and Fetuga (2017:85) established that the network quality of mobile services is one of the major challenges facing mobile network subscribers in Nigeria; thus customers' perception of network quality strongly affects their view of mobile operators and their satisfaction level. This explains why network quality was found to be the most influential factor leading to customer satisfaction in the Nigerian mobile telecommunications industry.

The statement item that had the strongest level of agreement was B19: "My mobile network covers most of the places I frequent" (mean = 3.81 and standard deviation = 1.143) (main finding 8). On the other hand, the statement item with the weakest level of agreement was B22: "I will not consider switching to another mobile network provider because of my current network coverage" (mean = 3.32 and standard deviation = 1.236) (main finding 9). The network quality construct was also considered to be statistically valid (main finding 20). This is understandable, as network

quality is regarded as the trigger of competitive advantage in the mobile telecommunications industry. When the network quality factors such as the downloading and uploading speed, system response time, call quality, coverage and network issues such as dropped calls, static, and interrupted cell phone calls does not match expectations, it results in customer complaints (Thaichon et al., 2014:276; Siong et al., 2015:1086). Consequently, this level of dissatisfaction will prompt switching to competitors who have a more extensive network coverage (Hossain et al., 2017:923; Nwakanma et al., 2018:4) or will encourage multiple SIM ownership, as customers seek to capitalise on the promotional offers and network marketing strengths of different mobile network providers (Izogo, 2016:746; Morgan & Govender, 2017a:2) (as theorised in Chapter 3 section 3.3.1).

Because network quality was the most influential factor leading to customer satisfaction in the Nigerian mobile telecommunications industry, mobile telecommunications network providers must ensure that the network quality they offer to subscribers is satisfactory and surpasses all expectations in order to retain their market share and establish long-term beneficial relationships with their customers. In order to do so, the following recommendations are made:

Recommendation 3: To reduce unsatisfactory network quality, mobile telecommunications network providers in Nigeria should deploy an adequate network infrastructure with high network capacity in both urban and rural areas such as, laying more fibre-optic cables, laying global submarine cables, pushing aggressively for the deployment of broadband network infrastructure and satellite transmitter installations, spectrum management, the expansion of 4G, and the introduction of new telecommunications technologies such as the current roll-out of 5G services (Dahal, 2019:138), as mentioned in Chapter 4, section 4.2.3. These installations and technologies will improve network speed, and the extent and strength of network signals. When customers consistently enjoy good network quality from their network provider wherever they go, they will be prompted to share their experiences and satisfaction with friends and family members, who will then be encouraged to subscribe to that mobile network.

Recommendation 4: Mobile network providers are encouraged to lobby the Nigerian government that import tax and other duplicated levies be reduced so as to encourage the mass importation of the equipment needed for network quality upgrades. Preferential exemptions and fast-track processing should also be given to infrastructural equipment and parts being imported by mobile network providers, so as to avoid the drawn-out processes of bureaucratic bottlenecks. Mobile network providers are also advised to push for a declaration that their facilities are 'critical national infrastructure' making it a criminal offence to vandalise telecommunications sites. This re-

categorising of the mobile telecommunications infrastructure would prompt the government to provide military resources to protect these installations. Mobile network providers should also source equipments from indigenous companies that can manufacture parts for their infrastructure and facilities, instead of relying totally on imports or foreign companies.

7.3.2.2 Overall service quality

The influence of the overall service quality factor on customer satisfaction had an overall mean score of 3.39 (1 = 'strongly disagree' and 5 = 'strongly agree'), which indicated that respondents neither agreed nor disagreed with the statement items measuring their perceptions and expectations of overall service quality (main finding 13). When measuring hypothesis H5, the results of the EFA and CFA supported the hypothesis (β=0.166, *p*=0.033) (main finding 36). Factor analysis was also carried out on overall service quality, which generated a new overall mean score of 3.37 (refer to section 6.10, Chapter 6). However, after the outcome of the SEM, it was discovered that overall service quality exerted the weakest influence on customer satisfaction. This is because, as pointed out by Akbar et al. (2017:34), when all other variables are close to constant, that is the only time that service quality makes a big difference.

The statement item with which respondents agreed the most was B31: "My mobile network operator provides timely information when there are new services" (mean = 3.65 and standard deviation = 1.018) (main finding 14). The two statement items with which respondents agreed the least were: "My mobile network provider follows up in a timely manner to customer requests" (B28) (mean = 3.19 and standard deviation = 1.015) (main finding 15), and: "My calls, text messages and internet services always go through, I hardly encounter network problems" (B33) (mean = 3.19 and standard deviation = 1.250) (main finding 15). This shows that, although mobile network telecommunications providers give timely information about new services, they do not follow up on time to customer requests, and their subscribers are always encountering network problems such as delays in call connections, delayed text message delivery, and poor Internet services.

As explained in the literature referred to in Chapter 4 (section 4.2.5), researchers have identified various factors as items for conceptualising overall service quality, such as the ability to communicate seamlessly with other networks, good voice quality, responsive service calls, proactive customer service, accurate billing details, diversified service offerings, and timely bills for postpaid connections (Chakraborty & Sengupta, 2014:238; Siong et al., 2015:1086;

Ogungbade, 2015:272; Adebiyi et al., 2016a:6; Mayaka & Oloko, 2018:312). Therefore mobile network providers should ensure that their overall service quality meets customers' expectations. In order to do so, the following recommendations are made:

Recommendation 5: From the research findings revealed by main finding 15 (refer to Chapter 6, section 6.5.1.5) Mobile network providers should understand that prompt responses to customer requests (customer care) and network quality are major factors with which customers have issues when considering overall service quality. This is supported by the literature in Chapter 4, section 4.2.5. Mobile network providers are thus recommended to ensure the provision of prompt customer care responses by employing enough customer care representatives who will attend speedily to customer care lines to avoid long rings and holding customers on the line for a long time. If all customer care operatives are busy attending to others, to avoid keeping a customer waiting, they can be instructed to register their number and expect a call back from a representative within a stipulated time. This would help in reducing customer complaints and reinforce the productiveness of customer relationship management.

Recommendation 6: Mobile network providers should adopt renewable energy sources (such as solar and hybrid-power electricity panels) for their facilities, so as to curb the persistent issue of power that has affected network coverage for its base stations (Isaiah et al., 2019:8). When base stations and cell sites have an uninterrupted power supply, they can continuously power transmitters for mobile signals and network speed. The management of mobile telecommunications companies should also roll out campaigns targeted at dissuading hoodlums and vandals from targeting their equipment, and sensitising host communities on the effects of such damage. This will help to improve network provision.

7.3.2.3 Diversity of products

Respondents indicated that they neither agreed nor disagreed with the statement items measuring the diversity of products (overall mean score = 3.31) (1 = 'strongly disagree' and 5 = 'strongly agree'). In this study, during the process of the factor analysis (EFA and CFA), the statement items for 'diversity of products' loaded onto other factors such as price fairness and overall service quality, and it was eventually removed because it had less than 0.4 communality with only two statement items left. So the statistical relationship between diversity of products and customer satisfaction was not calculated, and no further hypothesis testing or analysis was performed on the construct.

However, since respondents neither agreed nor disagreed with the influence of diversity of products on customer satisfaction, and because the factor also loaded onto other constructs, the following recommendation can be considered:

Recommendation 7: Mobile network providers should consider including a diversity of products as a marketing element of network quality. From the demographic information retrieved in this study (refer to section 7.3.1), a majority of respondents only purchased data, making the diversity of products factor something that was not important in the context of this study, which was carried out by a non-probability sampling method.

7.3.2.4 Customer service

The overall mean score for the perceptions and expectations of customer service was 3.31, which indicated that respondents neither agreed nor disagreed with the statements measuring their perceptions and expectations of customer service (main finding 1) (1 = 'strongly disagree' and 5 = 'strongly agree'). When measuring hypothesis H1, the factor analysis process revealed that the original scale items used for customer service loaded onto two different factors, which were renamed were named customer care (H1a) and customer service access (H1b).

- **Customer care** centred on how customer service representatives deal with customers and how their problems are resolved. The overall mean score for customer care was 3.38 (refer to Chapter 6, section 6.9), which indicated that respondents neither agreed nor disagreed with the statement items measuring customer care (1 = 'strongly disagree' and 5 = 'strongly agree'). During the measurement process for hypothesis H1a's outcome from SEM, the result of the SEM analysis supported the hypothesis (p=<0.001, β=0.306) **(**main finding 50). Question B1 ("My mobile network service provider's customer care representatives are courteous in handling my complaints") represented the weakest indicator (0.579), while Question B4 ("I find dealing with my current mobile network provider convenient") was the strongest indicator (0.608) of the construct. The customer care construct was also considered to be statistically valid (main finding 39).

- **Customer service access** deals with customers being able to have access to customer representatives and services. The overall mean score for customer service access was 3.23 (refer to Chapter 6, section 6.9, Table 6.10), which indicated that respondents neither agreed nor disagreed with the statement items measuring the construct (1 = 'strongly

disagree' and 5 = 'strongly agree'). The outcome of the SEM analysis supported hypothesis H1b ($p \leq 0.007$, $\beta = 0.210$) **(**main finding 51). Question B6 ("My current mobile network provider has a user-friendly website") represented the weakest indicator (0.465), while Question B8 ("My current mobile network provider offers customised (personalised) care to its customers") represented the strongest customer service access indicator (0.630).

This reveals that customer service should not be seen as just a single variable, as previous studies by Jere and Mukupa (2018:123), Nekmahmud and Rahman (2018:359) and Dey et al. (2020:7) have done: it should be considered and measured from the aspects of both customer service access and customer care, as was discovered by this study. The following recommendations are made in this regard:

Recommendation 8: Mobile network providers in Nigeria should make customer care one of their bedrock strategies, and invest in sending customer care operatives for regular compulsory trainings (such training should include enhancing their soft skills such as active listening, clear communication, using positive and reassuring language, adopting an apologetic manner or tone, providing real-life simulations or scenarios, and the importance of customer care to customer satisfaction and loyalty); that would enhance their communication and public relations skills, and re-enforce the importance of customer care among the workforce. Customer care operatives should also have extensive knowledge of all the products or offerings of the mobile network provider, and how they specifically work to fulfill customers' needs. This is to ensure that they are able to assist and inform the customer with any problem they may have.

Recommendation 9: Mobile network providers should ensure that they employ individuals who have a passion for and experience in customer relations, and will be able to uphold the customer-centric values, objectives, and mission of the company. Customer care representatives should be discouraged from sticking to scripts and formulaic responses when handling customer complaints or hostile situations; instead, employees should be encouraged to speak empathetically from the heart, and to engage customers as real people. Customer care representatives can do this by genuinely listening and apologising, personalising the conversation by addressing the customer by name, acknowledging the issues raised by the customer, showing accountability by resolving the issues raised, and avoiding passing the customer on to other employees without providing a warm hand-off.

Recommendation 10: Mobile telecommunications providers should expand and upgrade their customer care and call centres with state-of-the-art facilities so that they can attend to customers faster and more efficiently. The management of mobile telecommunications companies should endeavor to incentivize and reward customer care operatives when they defuse tense or hostile customer situations and complaints.

Recommendation 11: Mobile network providers must redesign their websites to become more customer-friendly and easier to navigate. Their websites should also have an icon or option on which customers can click and submit honest opinions of their displeasure or their satisfaction - with the products or services. User-friendly mobile apps that show options for a breakdown of airtime and data spent, a chatbot for customer service, and available bonuses, should also be launched by mobile network providers.

Recommendation 12: Mobile network providers should ensure that their websites are responsive and mobile-friendly (that is, a website that auto-adjusts its content to the screen size of any device from which it is accessed) as a majority of the respondents from the demographic profile (refer to section 7.3.1) were aged from 18 to 27 (52.6%, n = 205), and the great majority of the respondents spent the most on data subscriptions (84.6%, n = 330), indicating that they had access to mobile devices.

7.3.2.5 Price fairness

The overall mean for the respondents' perceptions and expectations of price fairness was somewhat low at 2.91, which indicated that most of them tended to disagree with the statements measuring their perceptions and expectations of price fairness (main finding 4) (1 = 'strongly disagree' and 5 = 'strongly agree'). When measuring hypothesis H2, the results from the SEM analysis supported it (p<0.001, β=0.439) (main finding 52). Price fairness was considered the second most influential factor for customer satisfaction (refer to Chapter 6, section 6.10.3). This was because, when customers are offered a fair price by a network provider, positive feelings towards that network provider gradually develop, and will eventually evolve into behavioural intentions such as repeat subscriptions, positive word-of-mouth, and established relationships (Dhasan & Aryupong, 2019:87). In addition, price fairness is perceived by many customers to be an extrinsic or tangible signal of service or product quality that augments other factors such as network quality and overall service quality (Azam & Karim, 2017:119; Yusuf, 2017:7; Nwakanma et al., 2018:4), especially in a market in which it is difficult to detect any notable difference in the

service quality of most network providers such as those in the Nigerian mobile telecommunications industry (Adebiyi et al., 2016a:6; Hossain et al., 2017:923).

The statement item with which respondents agreed most was B16: “Overall my mobile network provider delivers what they promise” (mean = 3.27 and standard deviation = 1.041) (main finding 5). The respondents agreed the least with statement item B14: “The overall advantages I receive from my mobile network provider are more than what I expected” (mean =2.48 and standard deviation = 1.096) (main finding 6).

In the light of the above discussion, the following recommendations are presented to mobile network providers in the Nigerian telecommunications industry:

Recommendation 13: From the results and findings presented in main finding 6 (refer to Chapter 6, section 6.5.1.2), mobile network providers are encouraged to treat the issue of price fairness with caution, as the theoretical literature has shown that mobile network subscribers in Nigeria are very price-sensitive (refer to Chapter 4, section 4.2.2). Therefore mobile network providers must review their prices regularly and charge customers fairly so that prices match the services offered. Mobile network providers can also offer different price ranges or data subscriptions for different age or customer segments, such as students who register on their providers’ websites with their student ID cards. They could be offered discounts, since findings from the demographic profile (refer to section 7.3.1) show that most of the respondents were aged from 18 to 27 (52.6%, n = 205), and that the great majority of the respondents spent more on data subscriptions (84.6%, n=330).

Recommendation 14: Mobile telecommunications network providers in Nigeria should refrain from making exaggerated claims or promises to customers (such as offering unlimited data subscriptions when they in fact are actually offering only 3GB; MTN’s recharge and win an airplane; offering cheap night data plans even though the network speed is very slow at night) that will needlessly heighten customers’ expectations. This stands to be a major problem for mobile network providers if it is not urgently addressed, as customer’s perceptions of their services will be considered dubious. The best approach, therefore, is to be open and transparent about the products or services that are offered and about what potential customers should expect (i.e., promise little, and deliver beyond expectations).

7.3.3. Secondary objective 2

To determine whether customer satisfaction leads to trust, commitment, low switching, and customer loyalty

As discussed in Chapter 1 (refer to sections 1.6.1.6 and 1.6.2.6), customer satisfaction is achieved when a person's expression of pleasure (or disappointment) results from comparing a service outcome with their expectations (Oliver,1997; Shah et al., 2018:363). According to Oliver (2014:8), customer satisfaction is a person's judgement of pleasure or disappointment resulting from comparing a service outcome with their expectations of consumption-related fulfillment, including the level of under-or over-fulfillment. If the performance falls below the expectation, the customer is dissatisfied, whereas if the performance matches the expectations, the customer is satisfied (Shah, Husnain & Zubairshah, 2018:363). The above definitions suggest that customer satisfaction is one of the primary aims of every business and every consumer transaction (Kaur & Soch, 2018:365). Therefore customer satisfaction is seen as a prerequisite for relationship-building and as clear evidence of the productiveness of a CRM strategy (Giannakis-Bompolis & Boutsouki, 2014:71).

As mentioned in Chapter 5 (refer to section 5.3.6.2), customer satisfaction, the relationship intention factors (trust, commitment, and low switching costs), and customer loyalty were adapted from previous literature. In Chapter 4 (refer to section 4.7), a literature review explained the relationship links between customer satisfaction, trust, commitment, low switching costs, while its link to customer loyalty was discussed in section 4.9 (refer to Chapter 4). The overall mean score for each factor was determined and discussed in Chapter 6 (refer to section 6.5.2). The section below briefly discusses the mean scores, the results of the data analysis, and the hypothesis testing, and presents recommendations.

7.3.3.1 Customer satisfaction

The overall mean score for customer satisfaction was 3.18, indicating that most respondents neither agreed nor disagreed with, but leaned more towards disagreeing with, the statements measuring their satisfaction (main finding 18) (1 = 'strongly disagree' and 5 = 'strongly agree'). When measuring hypotheses H6, H7 and H9, a positive relationship was predicted, while H8

predicted a negative relationship. The outcome of the structural equation modelling analysis supported hypotheses H6 *(p* ≤0.00, β=0.6944) (main finding 60), H7 *(p* ≤0.00, β=0.5088) (main finding 61), H9 (*p<0.001, β=0.742)* (main finding 56) which later shrank to (*p≤0.000, β=0.1713)* (main finding 63) during the mediation analysis (explained in Chapter 6, section 6.10.4) and H8 *(p* ≤0.00, β=0.2885) (main finding 62). This supports and confirms the above objective, as satisfied customers will remain in a trustworthy relationship with their network service provider as long as their expectations are consistently met and they can confidently really on the network service provider not to disappoint (Mahmoud et al., 2018:262). The discernment of trust will encourage subscribers to be committed to this exchange relationship, as they would have experienced mutual benefits through the rewards and services they have enjoyed (Morgan & Hunt, 1994:24; Goodman & Togna, 2014:38; Balaji, 2015:21; Clark et al., 2017:45). The negative relationship between customer satisfaction and low switching costs is also explained here, as mobile network subscribers who are in a satisfying, trusting, and committed relationship with their service provider will not consider switching to alternative providers.

The respondents agreed most with statement item C5: "Using services from my mobile network provider has been a worthwhile experience" (mean = 3.41 and standard deviation = 0.983) (main finding 19). The statement item with which the respondents least agreed was C3: "I am satisfied with my mobile network provider's price" (mean = 2.68 and standard deviation = 1.156) (main finding 20). This shows that, although the respondents were somewhat satisfied with their experiences since they had started using their mobile network provider, there were still some pressing factors that fell below their expectations, such as price.

In the light of the above discussion, the following recommendations are presented to mobile telecommunications providers:

Recommendation 15: Mobile network providers in Nigeria should understand that, although customers claim that they have been having a worthwhile experience (as revealed by main finding 19, Chapter 6, section 6.5.2.1), this can be attributed to the fact that they have not had the opportunity to subscribe to a mobile network provider that offers anything different from the norm (as supported by the literature in Chapter 1, section 1.1). Mobile network providers should therefore take up this challenge and work towards introducing packages and services that will change the trajectory of the market, such as artificial intelligence-powered customer support services that use virtual assistants, accepting cryptocurrencies for data or airtime transactions, automated phone calls, cloud computing, the Internet of Things (IoT), and telematics that help

mobile telecommunications providers to monitor their base stations and data centres remotely and enable mobile to subscribers interconnect their smart gadgets.

Recommendation 16: Mobile network providers in Nigeria should be committed to creating an inclusive platform for their subscribers to customise their own plans. Subscribers should also be included in the creation process of services or products, as this will encourage room for relationship-building. Multiple channels of feedback from subscribers should be used by mobile network providers, and those reviews or responses should be used to effect changes or make adjustments. This would show that the company values customers' input. When this is done, it increases the chances of having more satisfied customers and creating value.

Recommendation 17: Mobile network providers could also conduct regular analyses of their competitors by which they evaluate their own strengths and weaknesses against those of their rivals. This could then be used as a benchmark for improving in areas where they are lagging behind.

7.3.4. Secondary objective 3

To examine the relationship link between trust, commitment, and low switching costs as mediators between customer satisfaction and customer loyalty

In Chapter 4 (refer to section 4.9), an empirical literature review explained the relationship link between customer satisfaction, trust, commitment, low switching costs and customer loyalty. Some studies have posited that, apart from customer satisfaction, trust, commitment, and low switching costs are also major factors in attaining customer loyalty (Ibrahim, Hamid, Babiker & Ali, 2015:261; Shafei & Tabaa, 2016:350), making these factors precursors of loyalty (refer to Chapter 3, section 3.3). Trust, commitment, low switching costs and customer loyalty were adapted from previous literature, as shown in Chapter 5 (refer to section 5.3.6.2). The overall mean score for each factor was determined and discussed in Chapter 6 (refer to section 6.5.2). The sections below briefly discuss the mean scores, the results of that data analysis, the hypothesis testing, and recommendations.

7.3.4.1 Trust

As mentioned in Chapter 4 (section 4.4), trust is one of the most important determinants of a healthy long-term and reciprocal relationship, as it reduces the perceived risks associated with opportunistic behaviours by exchange partners (So et al., 2016:182; Hafez & Akther, 2017:142). Thus trust reduces a customer's feelings of vulnerability (Al-Hersh & Saaty, 2014:78). The overall mean for the respondent's trust is relatively low (3.00) which indicates that most respondents disagreed with the statements measuring their relationship intention of trust (main finding 21) (1 = 'strongly disagree' and 5 = 'strongly agree'). When measuring the hypothesis H10, a positive relationship was predicted. The outcome of the mediation analysis supported the hypothesis *(p* ≤0.000, β=0.3516) (main finding 64). The mediation analysis revealed that trust has a larger effect on customer loyalty, indicating that customer might be satisfied, but the more they trust the provider, the more loyal they will be (main finding 68).

The statement with which the respondents agreed most was C7: "I feel that I can rely on my current mobile network provider to serve me well" (mean = 3.38 and standard deviation = 1.069) (main finding 22). The respondents agreed the least with statement item C9: "I believe that my current mobile network provider will not try to cheat me" (mean = 2.57 and standard deviation = 1.128) (main finding 23), which indicates that respondents hold the opinion that their current mobile network provider will try to cheat them.

Mobile network providers should therefore, that when a subscriber trusts that a network provider will act in their interest, the higher will be the subscriber's preference to use the provider's services, and also to recommend the company's services favourably (Parsa & Sadeghi, 2015:1246; Aslam, Arif, Farhat & Khursheed, 2018:181). In order to effect this, the following recommendations are made:

Recommendation 18: Based on main finding 23 (refer to Chapter 6, section 6.5.2.2), mobile network providers should adopt a more transparent method of billing, as that is one of the only ways that customers will not regard them untrustworthy. Customer complaints relating to unwarranted charges or wrong billings should be handled speedily and professionally, so as to establish trustworthiness and disperse every thought that they are being defrauded from the mind of the subscriber. Automatic refunds should be activated for subscribers whose SMS were not delivered, or who experienced incomplete calls, network failures, congestion and interconnectivity problems, and when network glitches wipe off consumers' credit.

Recommendation 19: Given the result from main finding 23 (refer to Chapter 6, section 6.5.2.2), the management of mobile telecommunications companies must invest in a good public image. They could do this by investing in corporate social responsibility and community sustainability projects, such as building schools and hospitals in host communities, volunteering in community activities such as cleaning, organising charity fund raising that will be beneficial to subscribers, speaking out against social injustice, providing safer water for communities, and reducing pollution and radiation emissions by using renewable sources of energy for their base stations. They could sponsor scholarships and research programmes at tertiary institutions. Mobile network providers could adopt company policies that enable them to employ more younger people to reduce unemployment among youths. Mobile network providers could run advertisements using public figure endorsements (such as music artists, footballers, athletes, and social media influencers) who will vouch for them and speak about their integrity.

Recommendation 20: Mobile network providers should regularly update their servers' security to ensure that subscribers' information and details remain secure, so as to avoid any breaches or hacking.

Recommendation 21: Mobile network providers should engage and interact more with subscribers on their social media platforms such as twitter, Instagram, and Facebook. They can ask for new product or service ideas from customers on their social media platforms, and also respond swiftly to customer complaints. Mobile network providers could upload positive messages or videos and publish customer reviews and testimonials about the company on their social media platforms. When other customers see such reviews from their fellow subscribers, they will trust the company more. Being active on social media platforms will give mobile network providers a sense of availability and visibility that its subscribers will notice.

7.3.4.2 Commitment

As previously explained in Chapter 4 (section 4.5), 'commitment' is defined from a marketing perspective as an enduring desire to maintain a valued relationship. It also means staying in contact with satisfied customers, providing timely and accurate updates on product and service improvements, and proactively communicating when there is a distribution issue (Al-Hersh & Saaty, 2014:78). For this study, the overall mean score for commitment (3.30) demonstrates that the respondents neither agreed nor disagreed with the statement items measuring their relationship intention of commitment (main finding 24) (1 = 'strongly disagree' and 5 = 'strongly

agree'). When measuring hypothesis H11, a positive relationship was predicted. The result of the mediation analysis supported the hypothesis *(p* ≤0.000, β=0.3079) (main finding 65). The mediation analysis also revealed that commitment is a stronger predictor of customer loyalty than either customer satisfaction or low switching costs (main finding 69). This is because, when a customer senses that their mobile network provider has the desire and commitment to continue a relationship by seeking innovative ways to meet their needs, that customer will choose to be loyal (Negi & Ketema, 2013:112; Chakiso, 2015:59). Customers who are committed will not think of switching, and their loyalty will remain with their mobile service provider (Putit & Abdullah, 2019:23).

The statement item that had the strongest level of agreement was C16: "All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider" (mean = 3.45 and standard deviation = 1.157) (main finding 25). On the other hand, the statement item with the weakest level of agreement was C12: "I feel emotionally attached to my current mobile network service provider" (mean = 2.98 and standard deviation = 1.384) (main finding 26). These results confirmed that subscribers do not see any differences in what mobile network providers offer and so do not see the need to be committed to their mobile network provider.

The following recommendations could be adopted by mobile telecommunications providers to rectify some of the above observations.

Recommendation 22: Given main finding 25 (refer to Chapter 6, section 6.5.2.3), the management of mobile telecommunications companies should come up with products and services that distinguish their own companies from the others. Mobile telecommunications providers must move out of their comfort zone and be open to embracing new innovations or ideas that will help them to capture a part of the Nigerian mobile telecommunications subscriber base that is largely unsatisfied. Services and products for all segments of customers should be offered, so that everyone is catered for such as free roaming for frequent travellers, market bonuses for traders, data top-ups for students, and unlimited SMSes for couples. Mobile network providers could also offer specific app bundles for platforms such as Netflix, Hulu, Amazon Prime, Twitter, Tiktok, Instagram, Spotify, YouTube, and Paystack (i.e., bundles that allow a customer to use discounted data for a specific app). Collaborations can also be done with charity organisations such as like HelpAGirlChild, where females punch in a code to get free sanitary pads every month. When customers perceive that a mobile telecommunications provider is innovatively committed to meeting their needs and wants and to maintaining a relationship with them, the probability of

those customers being committed to the network provider increases (explained broadly in Chapter 4, section 4.5).

Recommendation 23: Given the responses revealed by main finding 26 (refer to Chapter 6, section 6.5.2.3), mobile telecommunications providers should adopt customer-centric strategies such as customisable and personalised services so that subscribers can create their own portfolio and pick the services they need. This would encourage emotional attachment, which is a form of commitment (affective commitment), as customers would see themselves as part of the organisation (refer to Chapter 4, section 4.5.1.1). Realistic promotional offers and loyalty rewards that can be automatically added to a subscriber's existing plan such as bonus data top-ups, bonus airtime for voice calls, unlimited SMS texts to the same network line, and Internet access to be used within a specified period - should be presented to customers

Recommendation 24: Mobile network providers should go out of their way to show customers that they are committed to offering better services and products. This could be done by publicly addressing general customer complaints and showing that measures are being taken to resolve such problems. Mobile network providers could also make radio, television and social media announcements or send SMSes to customers experiencing network issues, informing them that such issues are being rectified and stating the estimated time it will take to fix them.

Recommendation 25: Mobile network providers should endeavor to send customers messages on their birthdays, and even reward them with free airtime or data on such days. When a mobile network provider does this, the customer feels special: and every customer wants to patronise a business that makes them feel valued and recognised. This will most likely spur commitment from customers, who would see themselves as a part of the organisation and regard the relationship with their network provider as beneficial.

Recommendation 26: Mobile network providers can support and brand small scale businesses (owned by subscribers) that use their services consistently by providing branded items like small billboards with the business name, refrigerators, generators, note pads, pens, mini wifi or routers, and other office equipment. These can also serve as a source of advisement to the network provider. Subscribers who enjoy such benefits will consider the relationship with their network provider beneficial.

Recommendation 27: Mobile network providers are also encouraged to collaborate with smart-phone manufacturers such as iPhone and Samsung. These collaborations should allow customers to pay for their phones in installments (their bank accounts will be connected to their

mobile accounts) and even have the option of buying a second one for a lower price while enjoying free data for about six months. These phones could also be insured against theft with the mobile network provider. This recommendation would come in handy for mobile network providers, since the demographic profile (refer to section 7.3.1) reveals that the majority of the respondents were aged from 18 to 27 (52.6%, n= 205). Those within this age bracket are known to be mostly technologically savvy; many are students who would want the latest brand of phone, such as the Apple iPhone 12, Samsung Galaxy S20, Nokia 9.3 PureView, and Huawei Mate 40; and the great majority of the respondents spent more on data subscriptions (84.6%, n = 330). This recommendation would give customers a reason to be committed to their mobile network provider and encourage a sense of belonging.

7.3.4.3 Low switching costs

The statement items for low switching costs were initially negatively stated in the questionnaire, so they were reverse coded and measured for this analysis (Pallant, 2010:97). The mean and standard deviation scores were for the reverse-coded values. Overall, the mean of low switching costs stood at 3.09 (main finding 27), which indicated that the respondents disagreed with the statement items measuring low switching costs (1 = 'strongly disagree' and 5 = 'strongly agree'). After the factor analysis process, it was discovered that low switching costs had the lowest level of agreement (mean = 2.87 and standard deviation = 1.332) (main finding 49). When measuring hypothesis H12, a positive relationship was predicted. However, the results from the mediation analysis did not support the hypothesis ($p \geq 0.1423$, $\beta = -0.0530$) (main finding 66). Also, the p value was ≥ 0.1423, which indicated that statistically low switching costs had no impact on customer loyalty. This is because mobile network subscribers who are in a satisfying, trusting, and committed relationship with their service provider will not consider switching to alternative providers. However, if the mobile network service provider consistently fails to meet the needs and wants of its subscribers, they will seek out alternatives and switch to competitors who can meet their expectations since switching costs are low in the Nigerian mobile telecommunications sector.

The statement item with the highest level of agreement from the respondents was *C21: "I worry that I might pay a subscription fee to join an alternative mobile network operator" (mean = 3.77 and standard deviation = 1.205) (main finding 28). Statement item *C17: "I am scared of changing

my mobile number if I switch from my current mobile network provider" (mean =2.68 and standard deviation = 1.347) recorded the lowest level of agreement (main finding 29). This revealed that most of the respondents had not realised that switching costs were low or almost non-existent in the Nigerian mobile telecommunications industry. However, they were very much aware of the benefits of the mobile portability scheme, and were not so bothered about changing numbers when they ported to an alternative network. The issue of having multiple SIM cards also played a major part here, as they can own as many SIM cards as they want from any of the mobile network providers.

Theefore, for mobile network providers to avoid putting subscribers in a compromising position where they have to consider switching, the following recommendations are made:

Recommendation 28: Mobile network providers should liaise among themselves and come to interconnection agreements that are beneficial for all parties. This recommendation has also been encouraged by the Nigeria Communications Commission (NCC), as it would help to encourage and incentivise co-location and infrastructure sharing among operators in order to prevent the inefficient and indiscriminate siting of base stations and telecommunications facilities (NCC, 2019; The Staff, 2020). It would also discourage the possession of multiple SIM cards. The larger mobile operators should be discouraged from ripping off the smaller operators with huge interconnection charges and quickly disconnecting indebted smaller providers.

Recommendation 29: From the literature and research findings (refer to Chapter 2, section 2.8), mobile network providers should employ experts (technologist, engineers, software developers and technicians) to install their equipment and facilities, so as to avoid hasty or botched construction that will lead to wrongful congestion detection, operating software that is outdated, and cabinets without the capacity for expansion. This recommendation is presented because there have been allegations that the present network infrastructure and facilities were poorly and hastily constructed because network providers were trying to meet targets set by the government at the time they were granted licences (Okonji, 2013; Sutherland, 2018:255). Nigeria's mobile telecommunications industry was also in the news for bribes paid by Alcatel, ITT, ITXC, and Siemens (Sutherland, 2018:244). A recent case is that of MTN Nigeria: the ITU World Radiocommunications Conference (WRC) was persuaded by African and Arab countries, and it unexpectedly changed the 700 MHz band from being exclusively for broadcasting to be shared with mobile telecommunications, to meet the growing demand for broadband (El-Moghazi, Whalley & Irvine, 2016:8; Sutherland, 2018:258). In Nigeria, MTN was the sole bidder for a large portion of these frequencies, paying NGN34bn to the National Broadcasting Corporation (NBC)

(Adepoju, 2015; Garba & Adepetun, 2015). However, its Director General was questioned by the Economic and Financial Crimes Commission (EFCC), as a significant allegation was that NGN3.4m a 10 per cent broker's fee, had been paid to a consultant, in effect as a bribe (Sutherland, 2018:258)

Recommendation 30: Mobile network providers should note that most dissatisfied customers are still with them because they have barely any other choices, and the effort of switching seems to be too tiring, as shown by main findings 28 and 29 (refer to Chapter 6, section 6.5.2.4). The management of mobile telecommunications companies are thus encouraged to review their contract packages and to resist the urge to lock customers in by using deceptive terminology.

7.3.4.4 Customer loyalty

As mentioned in Chapter 4 (section 4.8), customer loyalty is described as a deeply held commitment consistently to repurchase from or patronise a preferred product or service in the future, despite situational influences, marketing efforts, or factors urging them to switch (Oliver, 1997:392; Afridi, Gul, Haider & Batool, 2018:217; Yaqub et al., 2019:65). The overall mean score for customer loyalty was 3.55, which indicated that the respondents neither agreed nor disagreed with statement items measuring their customer loyalty (main finding 30). After the factor analysis process, it was confirmed that customer loyalty had the highest mean score (mean = 3.55 and standard deviation = 1.034) (main finding 48). It is worth mentioning that loyal customers are a highly desired outcome and a growing concern to every business organisation; and the mobile telecommunications industry is not excluded (Rashmi & Krishnakumar, 2015:159; Ofori et al., 2018:583; Inegbedion & Obadiaru, 2019:583). For all businesses pursuing long-term profitability and sustainability, customer loyalty has become a significant goal (Inegbedion & Obadiaru, 2019:583).

The statement item with which respondents agreed the most was C25: "I am willing to purchase other services and do more business with my current mobile network provider in the next few years" (mean = 3.73 and standard deviation = 0.962) (main finding 31). The statement item with which respondents agreed the least was: "I would encourage my friends and relatives to do business with my network provider" (C23) (mean = 3.39 and standard deviation = 1.067) (main finding 32). These results show that, although the respondents were willing to do more business

with their network providers, they were very unlikely to recommend their network provider to others.

Mobile network providers should therefore ensure that they provide products and services that will keep customers loyal and prompt the establishment of long-term relationships. In order to effect this, the following recommendations are made:

Recommendation 31: From the opinions expressed by the respondents in main finding 31 (refer to Chapter 6, section 6.5.2.5), mobile network providers have a lifeline that gives them time to improve the services or products they offer to subscribers, as customers are still willing to do business with them in the next couple of years. Mobile network providers should not take this chance for granted, as customers will not hesitate to switch to a competitor that offers more or betterservices, irrespective of price. However the result of main finding 32 (refer to Chapter 6, section 6.5.2.5) also revealed that the respondents were not willing to recommend their mobile network provider to other people, which is a sign of dissatisfaction, and a lack of trust, commitment or loyalty. This may be because the subscribers believed that they could get better services or products from their network provider. It is therefore imperative that mobile network providers deliver excellent customer care, provide multiple ways to access customer service, offer good network quality, and charge fair prices, all of which is supported by the reviewed literature and the findings of this study (refer to Chapter 6, section 6.10.3).

Recommendation 32: Mobile network providers should ensure that all arms of government and related agencies involved in the regulation of telecommunications infrastructural facilities are present at negotiations, so that consensus is reached on the procedures for the installation of base stations and the levies to be paid. This would enable the efficient deployment of facilities across the country to boost network interconnection coverage and speed. When customers enjoy good network quality, they will be encouraged to recommend their network provider to friends and family through word-of-mouth and good reviews. This recommendation would help to rectify main finding 32 (refer to Chapter 6, section 6.5.2.5).

Recommendation 33: Mobile network providers should religiously carry out regular audits of their base stations and transmission links so that transmission failures are quickly investigated and rectified. When this is done, customers will be motivated to share their satisfactory experiences with friends and relatives. This is supported by expectation disconfirmation theory (refer to Chapter 3, section 3.3.6).

The next section presents tabulated links between the primary objective, secondary objectives, and hypotheses, and the questions in the questionnaire, the main findings, and the recommendations from the study.

7.4 LINKING THE PRIMARY OBJECTIVE, SECONDARY OBJECTIVES, AND HYPOTHESES TO THE QUESTIONS IN THE QUESTIONNAIRE, THE MAIN FINDINGS, AND THE RECOMMENDATIONS

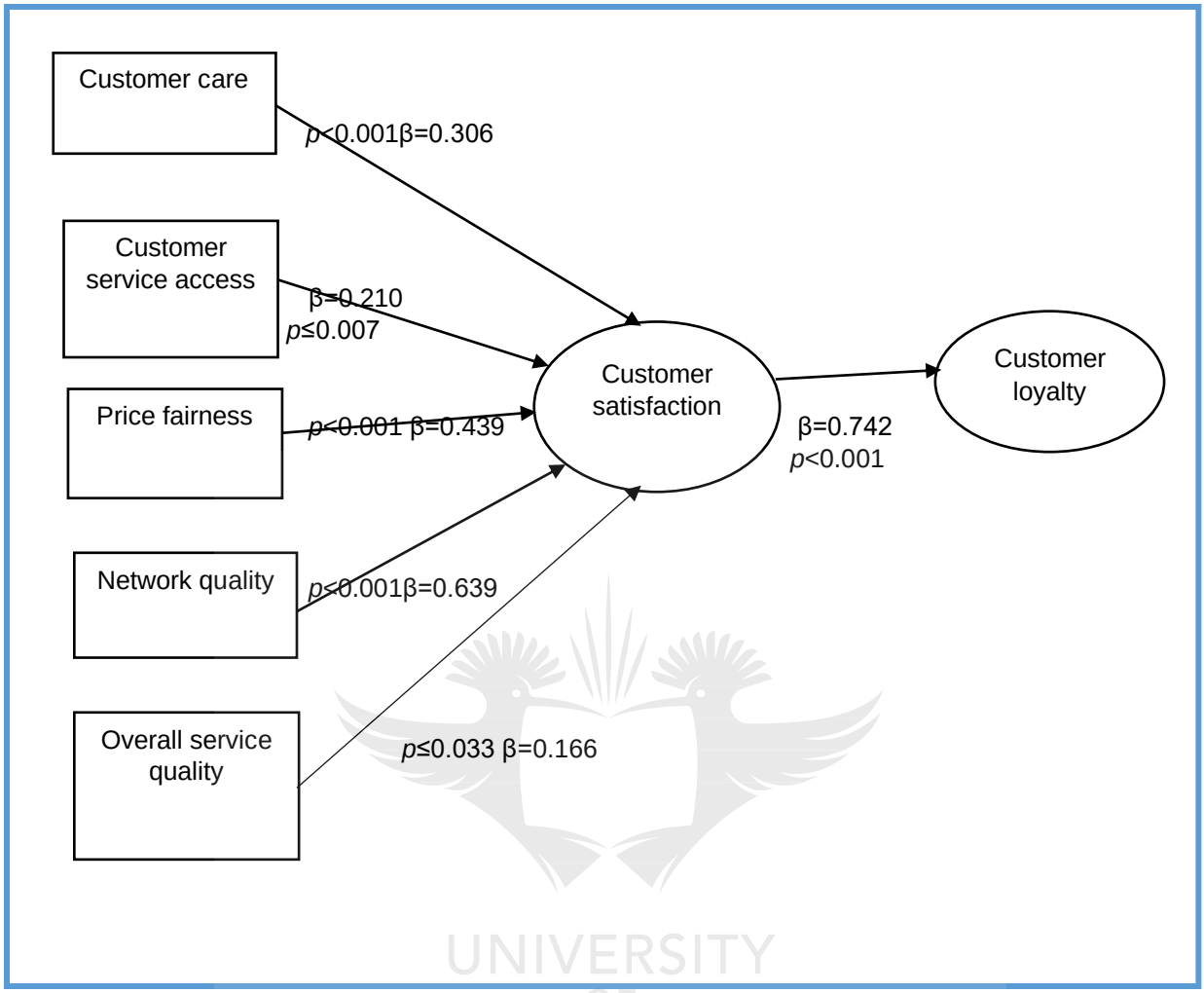
Table 7.1 summarises the links between the primary objective, the secondary objectives, and the hypotheses and the questions in the questionnaire, the main findings, and the recommendations from the study.

Table 7. 1: Links between primary objective, secondary objectives, and hypotheses, and questions in the questionnaire, main findings and recommendations

Primary objective	Secondary objectives	Hypotheses	Questions in the questionnaire	Main findings/results	Recommendations
To examine the factors that influence customer satisfaction mediated by trust, commitment, and low switching costs and their influence on customer loyalty in the telecommunications sector in Nigeria.	To determine whether customer service, price fairness, network quality, diversity of products, and overall service quality lead to customer satisfaction.	H1a H1b H2 H3 H4 H5	Section B (Q8-Q40)	H1a: Accepted (MF50) H1b: Accepted (MF51) H2: Accepted (MF52) H3: Accepted (MF53) H4: Removed (MF54) H5: Accepted (MF55)	R9 R10 R11-12 R4-5 R8 R6-7
	To determine whether customer satisfaction leads to trust, commitment, low switching and customer loyalty.	H6 H7 H8 H9	Section C (Q41-45)	H6: Accepted (MF60) H7: Accepted (MF61) H8: Accepted (MF62) H9: Accepted (MF56 & 63)	R13-15
	To examine the relationship link between trust, commitment, and low switching costs as mediators between customer satisfaction and customer loyalty.	H10 H11 H12	Section C (Q46-67)	H10: Accepted (MF64) H11: Accepted (MF65) H12: Rejected (MF66)	R16-18 R19-21 R22-24 R25-27

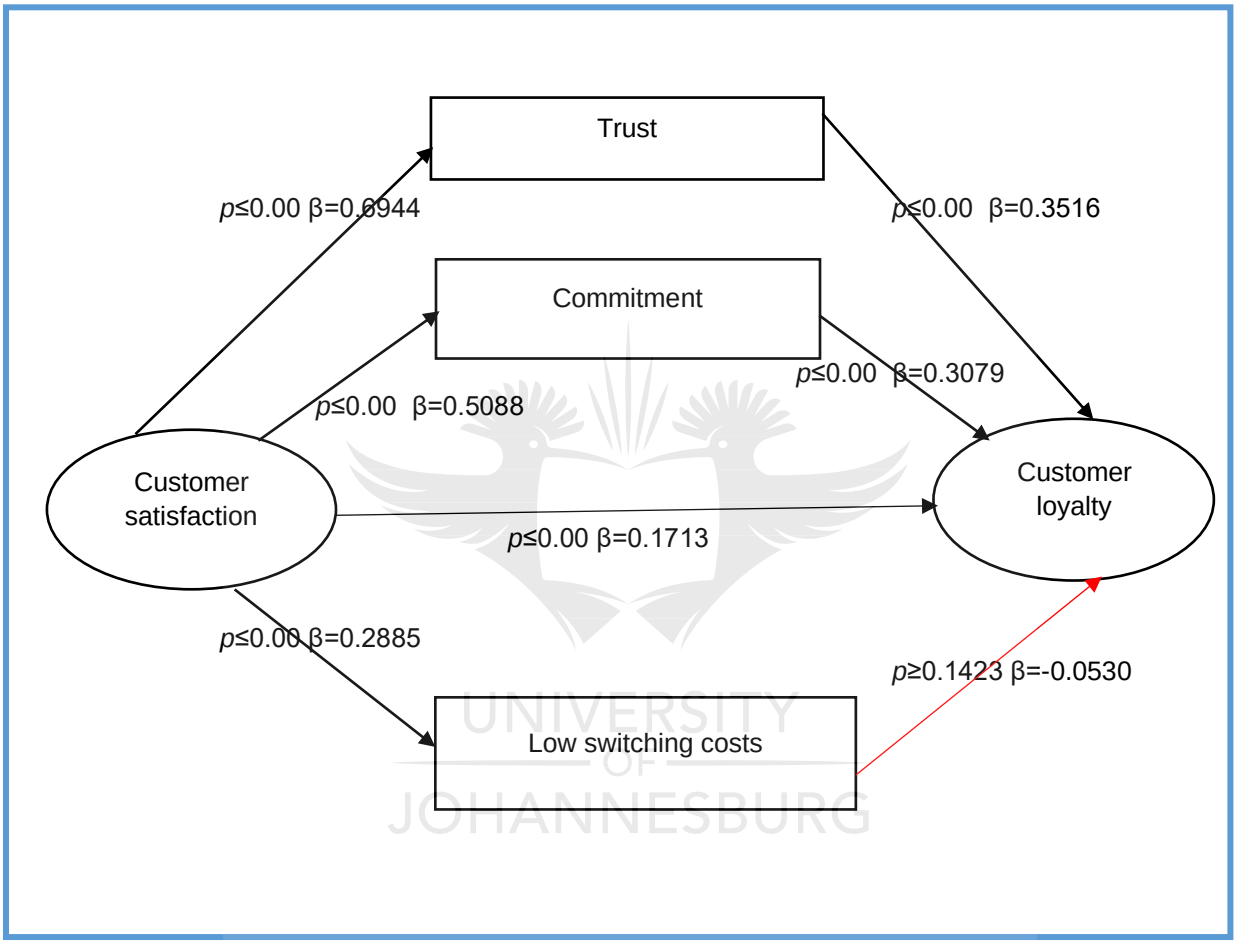
The model below shows the structural equation modelling results for the research objectives for factors influencing customer satisfaction and customer loyalty.

Figure 7. 1: Refined theoretical model and structural equation modelling results for factors influencing customer satisfaction and customer loyalty



The model below shows the mediation analysis results for the research objectives for customer satisfaction, relationship intention (trust, commitment and low switching costs) and customer loyalty

Figure 7. 2: Refined theoretical model and mediation results for research objectives for customer satisfaction, relationship intention (trust, commitment, and low switching costs) and customer loyalty



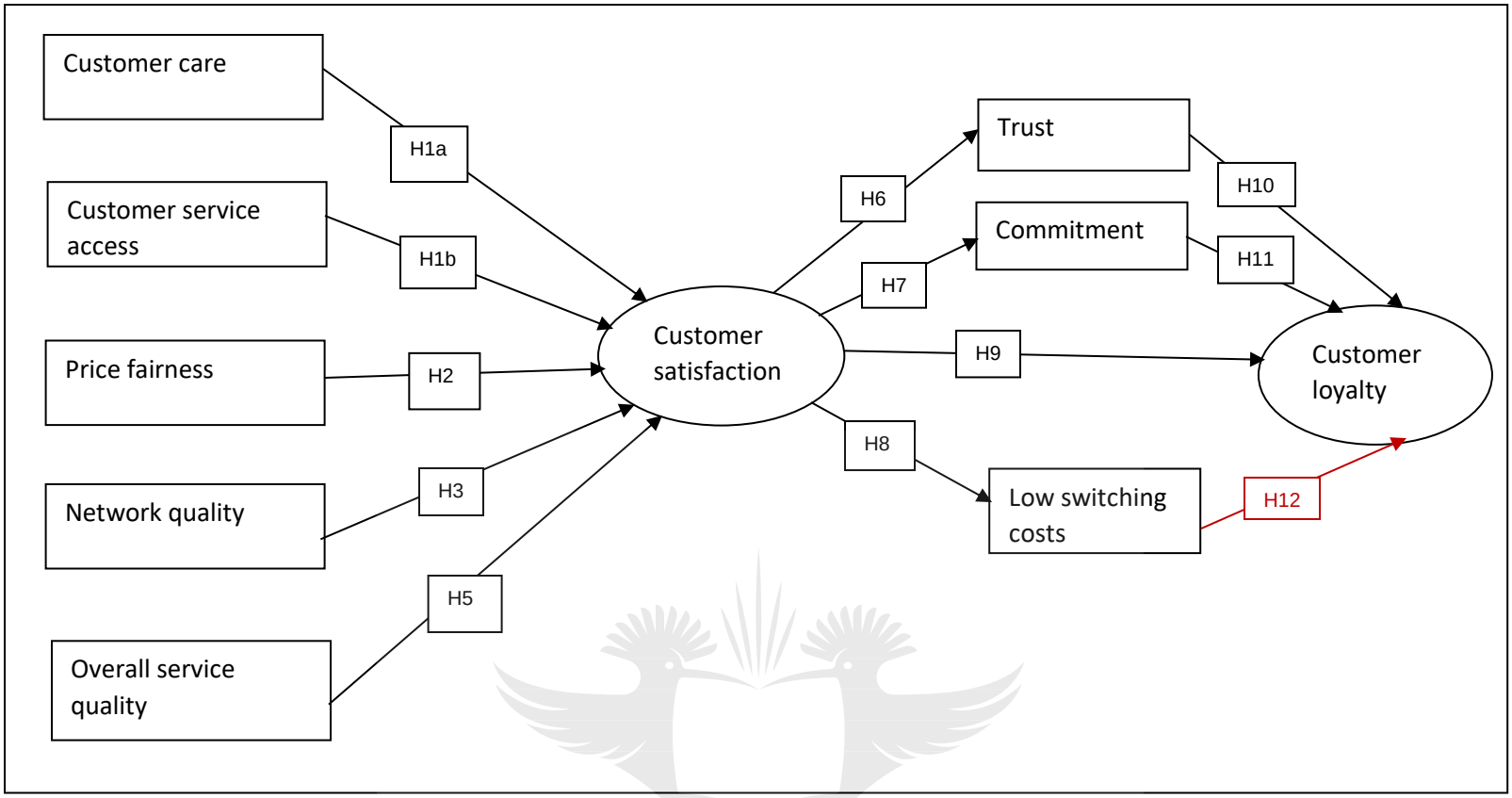
Note: ——▶ indicates a significant path ——▶ indicates a non-significant path

Source: Researcher's own construct

The primary and secondary objectives were met: it was proved that the factors adopted for this study influence customer satisfaction and customer loyalty in the Nigerian mobile telecommunications industry (Chapter 6, sections 6.10.3 and 6.10.4, Figure 6.2 and Figure 6.3). The main findings (Chapter 6, sections 6.10.3 and 6.10.4) confirmed that customer service (customer care and customer service access), price fairness, network quality, overall service

quality, customer satisfaction, trust, commitment, and low switching costs influence customer satisfaction and loyalty. Main findings 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65 and 66 (Chapter 6, section 6.11) revealed that there are positive relationships between all of the factors adopted for the study. It is therefore possible to conclude that the primary objective of the study has been achieved.

Figure 7. 3: Refined framework of factors that influence customer satisfaction and loyalty in the mobile telecommunications industry in Nigeria



Note: ⟶ indicates a significant path ⟶ indicates a non-significant path

Source: Researcher's own construct

7.5 THE SIGNIFICANCE OF THE STUDY

This section presents the practical and theoretical significance of the study.

7.5.1 Practical significance of the study

The mobile telecommunications sector in Nigeria is recieving attention because of the high rate of switching, the possession of multiple SIM cards (Oluwafemi & Adebiyi, 2018:103), and continuous complaints from dissatisfied customers, especially as the market is reaching saturation point (African Business Magazine, 2013; Izogo, 2016:748). This has made service providers eager to reconfigure their marketing strategies and to find strategies that will assist in developing long-term relationships with customers (Tauni et al., 2014:55).

The results from this study have revealed that network quality, customer care, customer service access, fair prices and overall service quality are the factors that influence customer satisfaction in the Nigerian mobile telecommunications industry (refer to Chapter 6, section 6.10.3). It was also noted that network quality had the strongest influence on customer satisfaction (refer to Chapter 6, section 6.10.3.1, main finding 57). The results from this study also showed that satisfaction, trust, and commitment are the factors that influence customer loyalty (refer to Chapter 6, section 6.10.4). Furthermore, it was revealed that satisfaction leads to trust, and commitment, and had a negative relationship with low switching costs (refer to Chapter 6, section 6.10.4). It was also disclosed that trust had the most influence on customer loyalty (refer to Chapter 6, section 6.10.4, main finding 68). This study has also revealed that, for any mobile network provider to survive the competitive market in Nigeria, it must adopt a customer-centric marketing strategy such as customer relationship management, which would enable it to focus on creating value for customers in innovative ways and help operators to retain and sustain their market share, thus building long-term relationships with customers (refer to Chapter 3, section 3.3).

This study is particularly significant for mobile network providers in Nigeria, as they will now be able to understand the factors that influence customer satisfaction and loyalty in the Nigerian telecommunications industry, and focus on improving on them by adopting the recommendations it provides (refer to section 7.3), based on the research findings. By adopting the suggested recommedations, mobile network providers could attract new customers, improve their customer retention, and increase their marketshare, as they would now understand how to keep their customers satisfied and loyal.

7.5.2 Theoretical significance of the study

Academically, this research contributes to theory's relevance in the contemporary consumer market and its practical application in relationship management, as it is grounded on different theories (social

exchange theory, relationship marketing theory, CRM theory, trust commitment theory, service quality theory, and expectation disconfirmation theory). This study focuses on a combination of factors (customer service, price fairness, network quality, diversity of products, and overall service quality) from numerous studies that until now have not been reviewed holistically. This study has shown that customer service should not be seen just as a single variable, as previous studies by Jere and Mukupa (2018:123), Nekmahmud and Rahman (2018:359), and Dey et al. (2020:7) have done: it should be considered and measured from the aspects of both customer service access and customer care. This study has also expanded the knowledge of studies relating to customer relationship management, customer satisfaction, trust, commitment, switching costs and customer loyalty. Future CRM and telecommunications research will also be guided by this study, since it was conducted in a developing economy, whereas most studies until now have been conducted in a developed nation.

Although the study achieved its primary objective, some limitations were encoutered during the course of the study. The next section outlines these limitations.

7.6 LIMITATIONS OF THE STUDY

The following limitations were a setback in the execution of this study.

- Only the four major network providers (MTN, GLO, AIRTEL and 9MOBILE) were included in the study, leaving out smaller mobile telecommunications providers such as M-Tel, Visafone, Starcomms, and Multi-links. It is therefore possible to say that an aspect of the industry and the opinions of its subscribers were not covered.
- Only the opinion and perceptions of mobile subscribers were collected, which means that this study only focused on the consumer's perspective, and left out the views of the mobile telecommunications companies' management and regulatory bodies or government representatives.
- The data was collected through online questionnaires, which favoured only respondents who had access to the Internet and data, which could skew the results.
- The researcher also faced a lack of published academic literature on the Nigerian mobile telecommunications industry, as most of the few academic journals that were found were outdated or focused on other sectors.

Taking the limitations of the study into consideration, the next section suggests recommendations for further research or studies in the future.

7.7 RECOMMENDATIONS FOR FURTHER RESEARCH

The following recommendations are made for future research:

- For further research on this topic and subject area, all mobile network providers should be included, irrespective of their subscriber base.
- Further research on the industry should cover the opinions and perspectives of all stakeholders, such as customers, the mobile telecommunications companies' management, and all levels of government and regulatory bodies.
- In addition, more statement items should be included for constructs such as the diversity of products to guarantee construct validity. These factor could then be analysed further, using SEM analysis, to determine their influence on customer satisfaction.
- Future studies could also be conducted in other emerging economies or geographical locations to test the reliability and applicability of the adopted factors in different regions.
- More research on the subject area and topic could be carried out using alternative methods of methodological choices (such as qualitative methods) and other sampling techniques (such as probability sampling).

7.8 CONCLUSION

Chapter 7 presented an understanding of the factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry. It looked at how the theoretical and literature-backed factors (*customer service = customer care + customer service access, price fairness, network quality, overall service quality, customer satisfaction, trust, commitment, low switching costs and customer loyalty) influence consumer behaviour and predict their relationship intentions. The introductory sections of this chapter presented an overview of the study, covering the highlights of the previous chapters and the findings made. Then conclusions and recommendations that would help mobile network providers curb the challenges being faced in the industry were made for all the factors adopted for the study under the proposed secondary objectives. The links between the study's primary objectives, secondary objectives, and hypotheses and the questions in the questionnaire, the main findings, and the recommendations were summarised. The chapter then discussed the significance of the study by highlighting its practical and theoretical significance. The limitations noted during the study were identified and were used as a basis for recommendations for future studies.

The study revealed that customer service should be viewed using the two dimensions of customer care and customer service access. In addition to this, customer care, customer service access, price fairness,

network quality, and overall service quality were confirmed as having a significant influence on customer satisfaction. The study also revealed that customer satisfaction, trust, and commitment have a significant influence on customer loyalty. However, the factor of low switching costs was confirmed not to have a significant influence on customer loyalty.

In conclusion, the study achieved its primary and secondary objectives of investigating the factors influencing customer satisfaction and loyalty in the Nigerian mobile telecommunications industry, from the customer's perspective, in order to help mobile network providers to serve their subscriber base better and to retain or grow their market share. The management of mobile telecommunications companies are also encouraged to look at the recommendations (R1-27) and to adopt these strategies so as to ensure value creation for their customers and all their stakeholders.

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ANNEXURE 1: QUESTIONNAIRE

Factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry

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This questionnaire is designed to obtain feedback from you on your experiences and perception from using any of the top four mobile network provider companies in Nigeria (MTN, GLO, AIRTEL AND 9MOBILE). It focuses on how these experiences have influenced your satisfaction and potential loyalty levels towards these mobile network telecommunication providers. This project forms part of a research study for the degree Master of Commerce in Marketing Management at the University of Johannesburg, South Africa.

Taking part in this survey is completely voluntary and anonymous. You can stop completing the questionnaire at any time without any effects. The questionnaire should take no more than 15 minutes of your time. Your co-operation is highly appreciated.

When evaluating a question, please answer the question from your own perspective, and keep your current mobile network provider that you have consistently used within the last six months in mind.

Please select only ONE option for a particular question, unless specified otherwise.

Should you have any questions, please feel free to contact:

Prof Christine De Meyer-Heydenrych at 011 559 1278 or cfdemeyer@uj.ac.za
Dr T Mofokeng at 011 559 2129 or tmofokeng@uj.ac.za
Mr Odele Tega at tegaodele@yahoo.com

Screening questions

Have you used any of the top four mobile network providers (MTN, GLO, AIRTEL AND 9MOBILE) consistently in the last six months?

No	0
Yes	1

Are you between the ages of 18 and 65?

No	0
Yes	1

If your answer is **'Yes' to the above questions**, please go ahead to complete the questionnaire.
If your answer is 'No' to the above questions, thank you for your time, and please do not complete the questionnaire. Thank you for your willingness to participate.

SECTION A – DEMOGRAPHIC INFORMATION

Please complete the following sections by selecting an appropriate answer for each question.

A1. What is you gender?

Male	1
Female	2
Prefer not to say	3

A2. Which is your age bracket?

1	2	3	4	5	6
18-27	28-37	38-46	47-56	57-65	Prefer not to say

A3. How many SIM cards do you currently have?

1	2	3	4	5
1	2	3	4	5 and more

A4. Who is your CURRENT PRIMARY (Main) network provider?

1	2	3	4
MTN	GLO	AIRTEL	9MOBILE

A5. How long have you been with the network provider you identified in the previous question?

1	2	3	4	5	6	7
Between 6 and 12 months	1year or more, but less than 2 years	2years or more, but less than 3years	3years or more, but less than 4years	4years or more, but less than 5years	5years or more, but less than 6years	6years or more

A6. What mobile network services do you spend more on?

1	2	3
Airtime	Data subscription	Other services, please specify:

A7. What is the range of your monthly spending on mobile network services?

1	2	3	4	5
N500-N1000	N1100-N2000	N2100-N3000	N3100-N4000	N4100 and more

SECTION B: CUSTOMER EXPERIENCE

When answering the following section, please keep your current mobile network provider (the one you identified in the questions above) in mind

Indicate on a scale of 1 to 5 where 1 is "strongly disagree" and 5 is "strongly agree", the extent to which you agree with each of the following statements pertaining to your experiences and perception of services with your current mobile network provider mentioned in question A4.

Please mark only ONE response per statement that most accurately describes your level of agreement.

1. CUSTOMER SERVICE

		Strongly Disagree				Strongly Agree
CS1	My mobile network service provider's customer care representatives are courteous in handling my complaints	1	2	3	4	5
CS2	I consider customer service as an important factor when evaluating a mobile network provider	1	2	3	4	5
CS3	I am not happy with the long delays I experience each time I make a call to my mobile network provider's customer care line	1	2	3	4	5
CS4	My mobile network provider's reputation for good service is encouraging	1	2	3	4	5
CS5	I find dealing with my current mobile network provider convenient	1	2	3	4	5
CS6	My current mobile network provider makes its customer service easily accessible through shops, call centres, their website etc	1	2	3	4	5
CS7	My current mobile network provider has a user-friendly website	1	2	3	4	5
CS8	My current mobile network provider has an online customer care	1	2	3	4	5
CS9	My current mobile network provider offers customised (personalised) care to its customers	1	2	3	4	5
CS10	My complaints to the customer care representatives are resolved speedily	1	2	3	4	5
CS11	I find my current mobile network provider's customer care department being able to provide me with all the information i need	1	2	3	4	5

2. PRICE FAIRNESS

		Strongly Disagree				Strongly Agree
PF1	The quality of the service I receive from my mobile network provider is worth the price	1	2	3	4	5
PF2	The services I get from my mobile network provider justify their higher prices	1	2	3	4	5
PF3	The overall advantages I receive from my mobile network provider are more than what I expected	1	2	3	4	5
PF4	Generally, I am happy using services and products from my current mobile network	1	2	3	4	5
PF5	Overall my mobile network provider delivers what they promise	1	2	3	4	5
PF6	The prices I have seen from other mobile networks are consistent with my current mobile network provider	1	2	3	4	5

3. NETWORK QUALITY

		Strongly Disagree				Strongly Agree
NQ1	I am satisfied with the network coverage offered by my current mobile network provider	1	2	3	4	5
NQ2	My mobile network covers most of the places I frequent	1	2	3	4	5
NQ3	My mobile network provider acts promptly to keep up with technology advancements by upgrading its network system	1	2	3	4	5
NQ4	Most of the countries or other places I visit are covered by my mobile network operator through roaming	1	2	3	4	5
NQ5	I will not consider switching to another mobile network provider because of my current network coverage	1	2	3	4	5

4. DIVERSITY OF PRODUCTS

		Strongly Disagree				Strongly Agree
DP1	My current mobile network provider offers me diverse services compared to other mobile network providers	1	2	3	4	5
DP2	The services offered by my network provider are very different from each other	1	2	3	4	5

DP3	I consider the services offered by mobile network providers similar	1	2	3	4	5
DP4	My current mobile network provider welcomes ideas or information from customers to enable it work effectively	1	2	3	4	5
DP5	My current mobile network provider clearly communicates when new services or products are available	1	2	3	4	5

5. OVERALL SERVICE QUALITY

		Strongly Disagree				Strongly Agree
OSQ1	My mobile network provider follows up in a timely manner to customer requests	1	2	3	4	5
OSQ2	The customer care representatives of my mobile network operator are always willing to help me	1	2	3	4	5
OSQ3	The responses to customers complaints are always taken seriously	1	2	3	4	5
OSQ4	My mobile network operator provides timely information when there are new services	1	2	3	4	5
OSQ5	My mobile network operator is consistent in providing good quality service	1	2	3	4	5
OSQ6	My calls, text messages and internet services always go through, I hardly encounter network problems	1	2	3	4	5

SECTION C: OVERALL LEVEL OF SATISFACTION, RELATIONSHIP INTENTIONS AND CUSTOMER LOYALTY

When answering the following section, please keep your current mobile network provider (the one you identified in the questions above) in mind

Indicate on a scale of 1 to 5 where 1 is "strongly disagree" and 5 is "strongly agree", the extent to which you agree with each of the following statements pertaining to your experiences and perception of services with your current mobile network provider mentioned in question A4.

Please mark only ONE response per statement that most accurately describes your level of agreement.

6. CUSTOMER SATISFACTION

		Strongly Disagree				Strongly Agree
CSA1	My mobile network provider's services completely meet my expectations	1	2	3	4	5
CSA2	I am satisfied with the interactions that I have had with my mobile network provider's customer service agents	1	2	3	4	5
CSA3	I am satisfied with my mobile network provider's price	1	2	3	4	5
CSA4	I am satisfied with my mobile network provider's network coverage	1	2	3	4	5
CSA5	Using services from my mobile network provider has been a worthwhile experience	1	2	3	4	5

7. TRUST

		Strongly Disagree				Strongly Agree
T1	I trust my mobile network provider	1	2	3	4	5
T2	I feel that I can rely on my current mobile network provider to serve me well	1	2	3	4	5
T3	I trust the billing system of my mobile network provider	1	2	3	4	5
T4	I believe that my current mobile network provider will not try to cheat me	1	2	3	4	5
T5	My current mobile network provider is reliable because it's mainly concerned with the customer's interest	1	2	3	4	5
T6	My mobile network provider wants to be known as one which keeps promises and commitments	1	2	3	4	5

8. COMMITMENT

		Strongly Disagree				Strongly Agree
C1	I feel emotionally attached to my current mobile network service provider	1	2	3	4	5
C2	I wish to maintain my relationship with my current mobile network service provider	1	2	3	4	5
C3	I feel committed to my current mobile network service provider	1	2	3	4	5
C4	I am so familiar with my mobile network provider that it would be difficult to change it	1	2	3	4	5
C5	All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider	1	2	3	4	5

9. LOW SWITCHING COST

		Strongly Disagree				Strongly Agree
LSC1	I am scared of changing my mobile number if I switch from my current mobile network provider	1	2	3	4	5
LSC2	I fear that I will lose some benefits that I currently enjoy if I switch to another network	1	2	3	4	5
LSC3	The inconvenience of having to learn a new service is too much	1	2	3	4	5
LSC4	I am not ready to go through the hassle of searching for information on a new mobile operator when switching	1	2	3	4	5
LSC5	I worry that I might pay a subscription fee to join an alternative mobile network operator	1	2	3	4	5

10. CUSTOMER LOYALTY

		Strongly Disagree				Strongly Agree
CL1	I would recommend my current mobile network service provider to someone who seeks my advice	1	2	3	4	5
CL2	I would encourage my friends and relatives to do business with my network provider	1	2	3	4	5
CL3	I would say positive things about my current mobile network provider to other people	1	2	3	4	5
CL4	I am willing to purchase other services and do more business with my current mobile network provider in the next few years	1	2	3	4	5
CL5	I intend to keep patronising my current network provider	1	2	3	4	5
CL6	I am a loyal customer of my current mobile network provider	1	2	3	4	5

Thank you for your time.

Please send the link to someone else that you know uses any of the mobile network providers (MTN, GLO, AIRTEL, 9MOBILE) listed in the first section.

ANNEXURE 2: ETHICS APPROVAL LETTER

UNIVERSITY OF JOHANNESBURG

CBE RESEARCH ETHICS COMMITTEE

Dear Mr O Tega, Prof De Meyer-Heydenrych & Dr Mofokeng

ETHICAL APPROVAL GRANTED FOR RESEARCH PROJECT

Decision: Clearance granted

This letter serves to confirm that that the proposed research project indicated in the table below, has been reviewed by the Scool of Consumer Intelligence and Information Systems at the University of Johannesburg. Ethical clearance is hereby granted and is valid for three years, from 1 April 2020 until 31 March 2022.

Applicant	Mr O Tega
Supervisor	Prof De Meyer-Heydenrych; Dr T Mofokeng
Student/staff number	218097949
Title	Factors influencing customer satisfaction and loyalty in the Nigerian Telecommunications industry
Decision date at meeting	30 March 2020
Reviewers	REC members
Ethical clearance code	2020SCiiS023
Rating of application	Code 02

CODE 01 - Approved

CODE 02 - Approved with suggestions/ requirements with no re-submission

CODE 03 - Referred back

CODE 04 - Disapproved, cannot re-submit

The researcher/s may now commence with the study providing that:

1. The researcher/s will ensure that the project adheres to ethical research requirements 2. The researcher/s will be conducting the study as set out in the approval application

3. The researcher/s will ensure that project adheres to all applicable legislation, scopes of practice, professional codes of conduct and scientific standards as it pertains to the field or study.
4. The researcher/s will bring under the attention of the research ethics committee any proposed changes, concerns that arise, and unexpected ethical management issues

- The final approved questionnaire must be submitted to the ethics committee.

5. Any changes that can affect the study-related risks for participants or researchers must be reported to the committee in writing
6. No fieldwork activities may continue after the ethical clearance has expired. A request for an extension of ethical clearance can be made in writing to the REC

Prof T du Plessis
Co-Chairperson: tduplessis@uj.ac.za

18 May 2020
Date

ANNEXURE 3: ITEMS AND SCALES USED IN THE QUESTIONNAIRE

Construct	No	Item	Source	Response format	Scale type
SECTION A: General and demographic information					
Gender	1	Male	Developed for the study	Dichotomous	Nominal
		Female			
		Prefer not to say			
Age bracket	2	18-27	Developed for the study	Multiple-choice	Nominal
		28-37			
		38-46			
		47-56			
		57-65			
		Prefer not to say			
Number of SIM cards	3	1	Developed for the study	Multiple-choice	Nominal
		2			
		3			
		4			
		5 and more			
Network provider	4	MTN	Developed for the study	Multiple-choice	Nominal
		GLO			
		AIRTEL			
		9MOBILE			
Years with mobile network provider	5	Between 6 and 12 months	Developed for the study	Multiple-choice	Ordinal
		1year or more, but less than 2 years			
		2years or more, but less than 3years			
		3years or more, but less than 4years			
		4years or more, but less than 5years			
		5years or more, but less than 6years			
		6years or more			
Mobile network services spent more on	6	Airtime	Developed for the study	Multiple-choice	Nominal
		Data subscription			
		Other services, please specify:			
Monthly spending	7	N500-N1000		Multiple-choice	Ordinal
		N1100-N2000			

on mobile network services		N2100-N3000 N3100-N4000 N4100 and more	Developed for the study		
	SECTION B				
Customer service	8	My mobile network service provider's customer care representatives are courteous in handling my complaints	Jere & Mukupa, (2018:123), Nekmahmud & Rahman (2018:359) and Dey et al. (2020:7)	Scaled	Likert (Interval)
	9	I consider customer service as an important factor when evaluating a mobile network provider		Scaled	Likert (Interval)
	10	I am not happy with the long delays I experience each time I make a call to my mobile network provider's customer care line		Scaled	Likert (Interval)
	11	My mobile network provider's reputation for good service is encouraging and has been a source of concern to me		Scaled	Likert (Interval)
	12	I find dealing with my current mobile network provider convenient		Scaled	Likert (Interval)
	13	My current mobile network provider makes its customer service easily accessible through shops, call centres, their website etc		Scaled	Likert (Interval)
	14	My current mobile network provider has a user-friendly website		Scaled	Likert (Interval)
	15	My current mobile network provider has an online customer care		Scaled	Likert (Interval)
	16	My current mobile network provider offers customised (personalised) care to its customers		Scaled	Likert (Interval)
	17	My complaints to the customer care representatives are resolved speedily		Scaled	Likert (Interval)
	18	I find my current mobile network provider's customer care department being able to provide me with all the information i need		Scaled	Likert (Interval)
Price fairness	19	The quality of the service I receive from my mobile network provider is worth the price	Iyer et al. (2016:51)	Scaled	Likert (Interval)
	20	The services I get from my mobile network provider justifies their higher prices		Scaled	Likert (Interval)
	21	The overall advantages I receive from my mobile network provider are more than what I expected		Scaled	Likert (Interval)
	22	Generally, I am happy using services and products from my current mobile network		Scaled	Likert (Interval)
	23	Overall my mobile network provider delivers what they promise		Scaled	Likert (Interval)
	24	The prices I have seen from other mobile networks are consistent with my current mobile network provider		Scaled	Likert (Interval)

Network quality	25	I am satisfied with the network coverage offered by my current mobile network provider	Jere & Mukupa, (2018:124)	Scaled	Likert (Interval)
	26	My mobile network covers most of the places I frequent		Scaled	Likert (Interval)
	27	My mobile network provider acts promptly to keep up with technology advancements by upgrading its network system		Scaled	Likert (Interval)
	28	Most of the countries or other places I visit are covered by my mobile network operator through roaming		Scaled	Likert (Interval)
	29	I will not consider switching to another mobile network provider because of my current network coverage		Scaled	Likert (Interval)
Diversity of products	30	My current mobile network provider offers me diverse services compared to other mobile network providers	Matt et al. (2019:1550) and Kundu & Mor, (2017:170)	Scaled	Likert (Interval)
	31	The services offered by my network provider are very different from each other		Scaled	Likert (Interval)
	32	I consider the services offered by mobile network providers similar		Scaled	Likert (Interval)
	33	My current mobile network provider welcomes ideas or information from customers to enable it work effectively		Scaled	Likert (Interval)
	34	My current mobile network provider clearly communicates when new services or products are available		Scaled	Likert (Interval)
Overall service quality	35	My mobile network provider follows up in a timely manner to customer requests	Koi-Akrofi et al. (2013:90)	Scaled	Likert (Interval)
	36	The customer care representatives of my mobile network operator are always willing to help me		Scaled	Likert (Interval)
	37	The responses to customers complaints are always taken seriously		Scaled	Likert (Interval)
	38	My mobile network operator provides timely information when there are new services		Scaled	Likert (Interval)
	39	My mobile network operator is consistent in providing good quality service		Scaled	Likert (Interval)
	40	My calls, text messages and internet services always go through, I hardly encounter network problems		Scaled	Likert (Interval)
	SECTION C				
Customer satisfaction	41	My mobile network provider's services completely meet my expectations	Gupta & Sahu, (2015:385-386)	Scaled	Likert (Interval)
	42	I am satisfied with the interactions that I have had with my mobile network provider's customer service agents		Scaled	Likert (Interval)

	43	I am satisfied with my mobile network provider's price		Scaled	Likert (Interval)
	44	I am satisfied with my mobile network provider's network coverage		Scaled	Likert (Interval)
	45	Using services from my mobile network provider has been a worthwhile experience		Scaled	Likert (Interval)
Trust	46	I trust my mobile network provider	Ofori et al. (2018:598)	Scaled	Likert (Interval)
	47	I feel that I can rely on my current mobile network provider to serve me well		Scaled	Likert (Interval)
	48	I trust the billing system of my mobile network provider		Scaled	Likert (Interval)
	49	I believe that my current mobile network provider will not try to cheat me		Scaled	Likert (Interval)
	50	My current mobile network provider is reliable because it's mainly concerned with the customer's interest		Scaled	Likert (Interval)
	51	My mobile network provider wants to be known as one which keeps promises and commitments		Scaled	Likert (Interval)
Commitment	52	I feel emotionally attached to my current mobile network service provider	Minta, (2018:28)	Scaled	Likert (Interval)
	53	I wish to maintain my relationship with my current mobile network service provider		Scaled	Likert (Interval)
	54	I feel committed to my current mobile network service provider		Scaled	Likert (Interval)
	55	I am so use to my mobile network provider that it would be difficult to change it		Scaled	Likert (Interval)
	56	All mobile network providers offer the same products and services, so it's not worth it to leave my mobile network provider		Scaled	Likert (Interval)
Low switching cost	57	You are scared of changing mobile number if you switch from your current mobile network provider	Palamidovska-Sterjadovska & Ciunova-Shuleska, (2017:205)	Scaled	Likert (Interval)
	58	I fear that I will lose some benefits that I currently enjoy if I switch to another network		Scaled	Likert (Interval)
	59	The inconvenience of having to learn a new service is too much		Scaled	Likert (Interval)
	60	I am not ready to go through the hassle of searching for information on a new mobile operator when switching		Scaled	Likert (Interval)
	61	I worry that I might pay a subscription fee to join an alternative mobile network operator		Scaled	Likert (Interval)

Customer loyalty	62	I would recommend my current mobile network service provider to someone who seeks my advice	Rather, (2018:14)	Scaled	Likert (Interval)
	63	I would encourage my friends and relatives to do business with my network provider		Scaled	Likert (Interval)
	64	I would say positive things about my current mobile network provider to other people		Scaled	Likert (Interval)
	65	I am willing to purchase other services and do more business with my current mobile network provider in the next few years		Scaled	Likert (Interval)
	66	I intend to keep patronising my current network provider		Scaled	Likert (Interval)
	67	I am a loyal customer of my current mobile network provider		Scaled	Likert (Interval)

ANNEXURE 4: LETTER FROM EDITOR

Michael J. McCoy, editor

Make no mistake

Cell: +27 83 664 3982
e-mail: <editor@writeright.co.za>
SA Government CSD supplier number: MAAA0756443
Associate member, Professional Editors' Guild, South Africa

31 December 2020

To whom it may concern

I certify that I was contracted by **Mr Tega Odele** to assist with the language editing of his Master's dissertation, ***Factors influencing customer satisfaction and loyalty in the Nigerian telecommunications industry***.

I edited the document using the 'Track changes' feature of Microsoft Word®. I focused on correcting typing errors, and ensuring that the syntax, spelling, and punctuation were correct, that the language was idiomatically acceptable, that the register was appropriate to an academic document, and that the document was as free from ambiguity as possible.

Where necessary, terms or passages that were unclear to me, such that I was not confident about editing them, were brought to the attention of the author. In the process I neither made nor suggested any changes to the substance of the document.

I proofread the reference list for any obvious typing errors or missing information, and to check whether the formatting was consistent. I also cross-checked the reference list against the in-text citations, and pointed out any cases where references were missing from one or the other or where details did not match. I did not check whether every reference in the list was correctly recorded and/or cited, as that is primarily the responsibility of the client, especially when they are post-graduate students. However, I did check some on-line when I needed clarity about them.

The final decision about accepting or rejecting all the changes and suggestions remained with the author.

Michael J. McCoy BA (HONS), BTH (HONS), MTH, DPS

Proofreader and language editor